INSTALLATION MANUAL

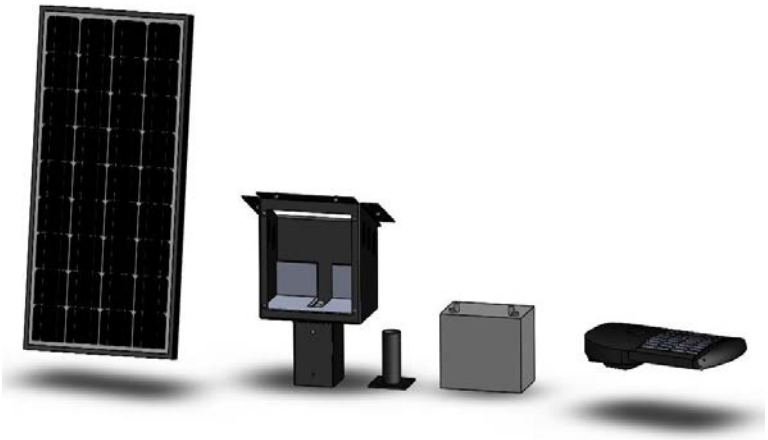
ZX SERIES - COMMERCIAL SOLAR LIGHTING SYSTEMS

IMPORTANT: Always install the system assembly on the pole before inserting the batteries. The assembly system should never be manipulated when the batteries are installed inside.

LIST OF MATERIAL

A) Solar module with integrated control system and wiring. (1 per system)
B) Battery main enclosure (1 per system)
C) Battery, 12V (1 per system)
D) Stainless Steel Hardware, 1/4”-20 (ZX60) or 5/16”-18 (ZX100 & ZX180) for system assembly
E) LED Luminaire (12Vdc compatible only)
F) Luminaire mounting tenon
Note : The ZX system operates at 12Vdc. Other voltage will damage system.

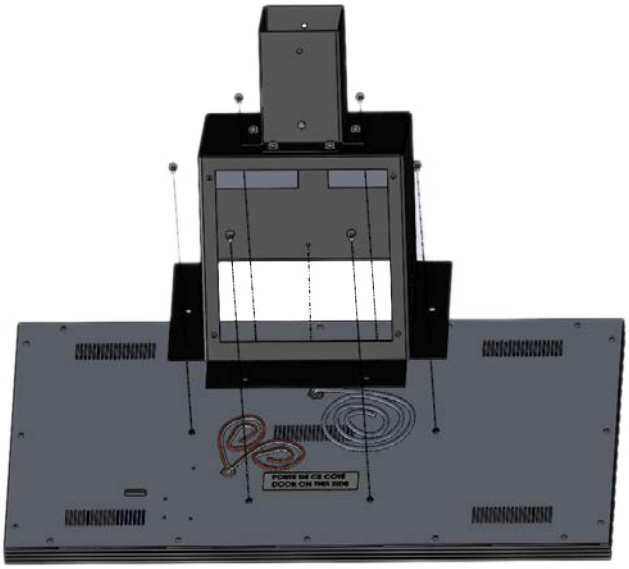
ZX SYSTEM COMPONENTS

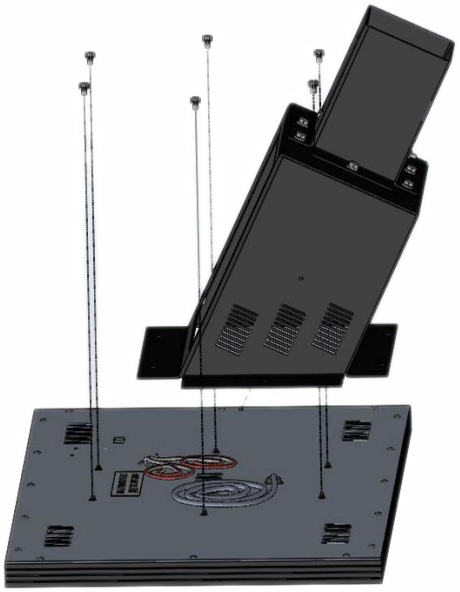


ZX FINAL ASSEMBLY

STEP 1:

Using the supplied 1/4”-20 (ZX60) bolts or the 5/16”-18 (ZX100 & ZX180) bolts and hardware (hex bolt, lock washer, flat washer), fasten the battery compartment to the solar module as indicated on the image. Orientation of the battery box is critical, use the “Door on this Side” sticker to confirm orientation.





Step 2: Find the optimal system orientation

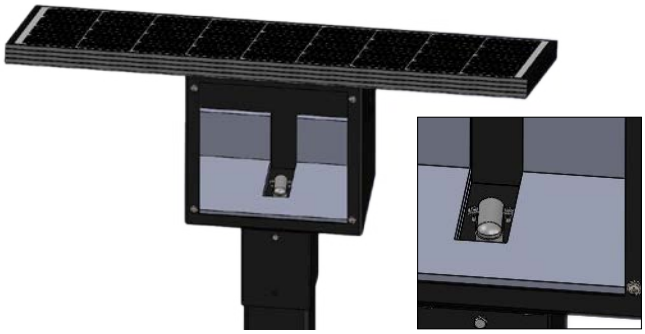
a) First determine the system orientation so that the solar module faces true south.

b) Use the drill guide at the end of the document to drill the pole at the appropriate locations.

c) Install the system on the pole. Use the 1/4”-20 bolt and hardware (bolts, flat washer, lock washer and nut) through the pole to secure in place.

STEP 3:

Insert the luminaire power cable located in the battery main enclosure through the 90 deg connector located at the bottom to make it available for the luminaire connection. Supplied cable: #16 AWG, pre-installed on the control side, not shown in this drawing.



STEP 4:

Install the tenon and light at the desired location. Refer to the tenon drawing and luminaire installation guide herein for more details.

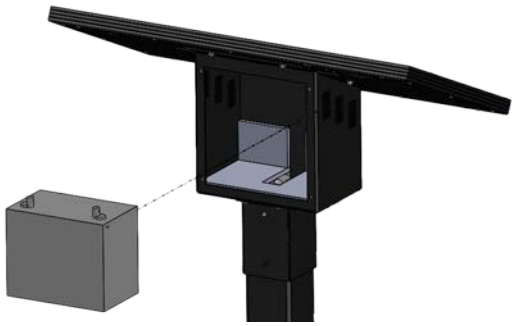
Avoid having the luminaire illuminate the solar module surface. This would cause synchronization errors as the artificial lighting coming from the luminaire would simulate daylight causing the luminaire to turn ON and OFF every 5 minutes.

The 12Vdc luminaire requires 3 connections: Red positive (+), Black negative (-) and White dimming (signal). It is important to make all 3 connections so that the system operates correctly according to current or future operating profiles.

Step 5:

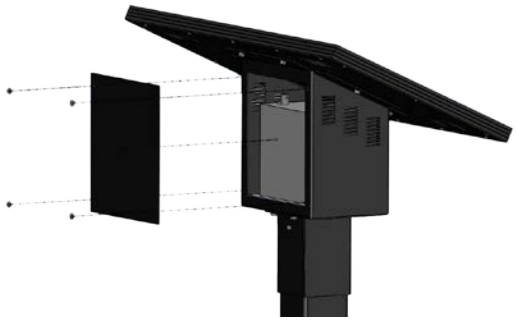
Insert the battery inside the compartment and make the connection using the quick connector labeled “BATTERY”.

Confirm proper system operation by **observing a green indicator light** behind the system status window.



STEP 5:

Close the quick access door.



1.1 INSTALLATION GUIDELINES

To avoid a loss of autonomy and a malfunction:

- The luminaire must be installed horizontally and must never be tilted;
- The luminaire must be installed in an open space with no trees or structures nearby, this could favour snow accumulation and shading;
- The solar module must ideally oriented towards the south, otherwise see table “ORIENTATION AND AUTONOMY”.

Failing to follow these recommendations can result in loss of system performance.

FACTORS AFFECTING AUTONOMY:

Lack of sunshine, very low ambient temperature, snow accumulation due to trees or structures nearby, shading due to nearby trees or structures, solar module orientation (see table), sunshine below the monthly averages.

SOLAR PANNEL ORIENTATION AND AUTONOMY

Solar Module Orientation	Period	Autonomy losses
South (≈ optimal)	Annual	0%
	Summer	0%
	Winter	0%
East / West	Annual	-21%
	Summer	-15%
	Winter	-40%
North	Annual	-50%
	Summer	-41%
	Winter	-72%

1.2 STORAGE AND HANDLING:

If you wish to store the luminaire, the battery needs to be recharged before storing for a period of 15 days or more in order to prevent damage to the battery. The luminaire must be stored at 20°C room temperature.

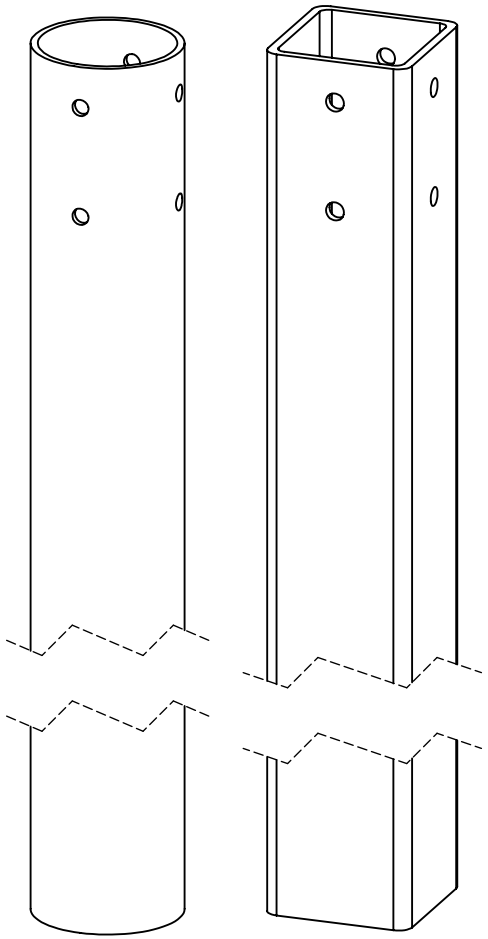
The luminaire should never be manipulated when the battery is inside. Use the quick access door to remove the battery before handling.

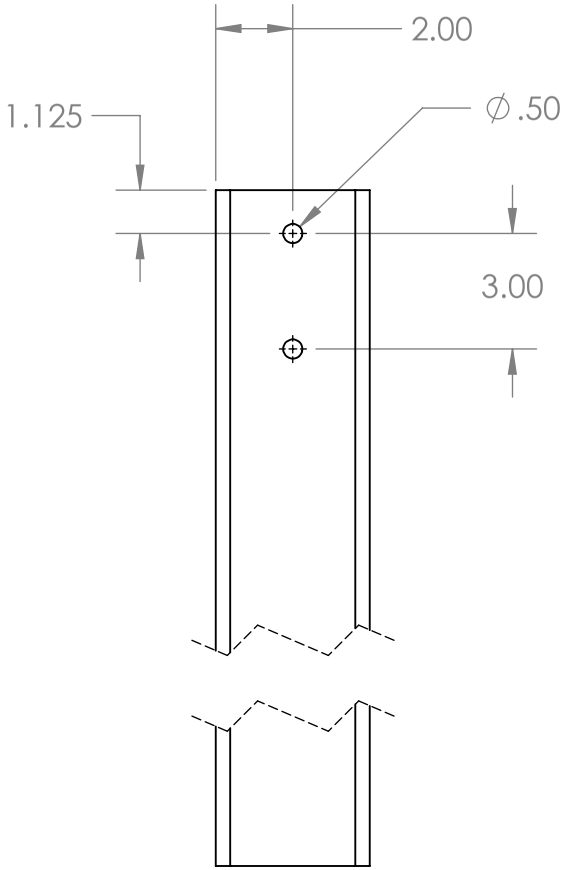
1.3 DEEP DISCHARGE PROTECTION

This protection significantly increases battery lifespan. This protection also prevents permanent damage to the battery caused by very deep discharges during cold weather. **When the battery reaches a 50% state of charge, the battery is automatically disconnected from the system until it’s state of charge reaches 85%** i.e. about 1 day of sunshine in summer and about 4 days of sunshine in winter.

1.4 DAY-NIGHT TRANSITION

The fixture uses the solar panel to detect day and night periods. The night transition requires a very low brightness level for 5 continuous minutes. This constraint prevents false night transitions. Avoid exposing the luminaire to an artificial light source that may cause synchronization errors by simulating the day. If the fixture operates erratically, make sure the solar module is not covered with debris or heavy snow. The luminaire automatically corrects synchronization errors after 24 hours. The occupancy sensor has its own photocell, which does not activate when the ambient brightness is too high.





NOTE:

The installation of the solar system must be made using a bolt which passes through the post. Follow the this drilling pattern for the position of holes.

Drill holes on the 4 faces to facilitate the installation.

Tenon drilling schemes not shown here. See on next pages.

The fixture's tenon must be installed a minimum of 12" below the top of the post.

POLE NOT INCLUDED
Tenon drilling pattern not shown here.

REV.	DESCRIPTION	DATE	FROM
1	ADDTION OF THE ROUND POST AND MODIFICATION OF THE NOTE	20 JUL 2021	JFOL

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES

DEFAULT TOLERANCES:
ANGULAR ±1°
TWO PLACE DECIMAL ±.06"
THREE PLACE DECIMAL ±.031"
HOLES ±.005"

MATERIAL

THICKNESS "

FINISH

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JFOL	5 Jan 2021

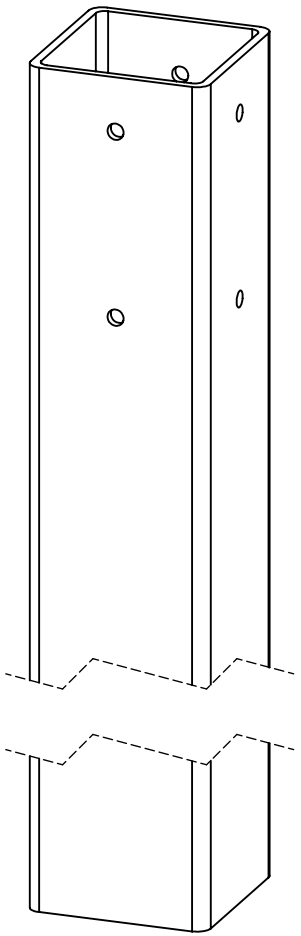
VISION SOLAIRE

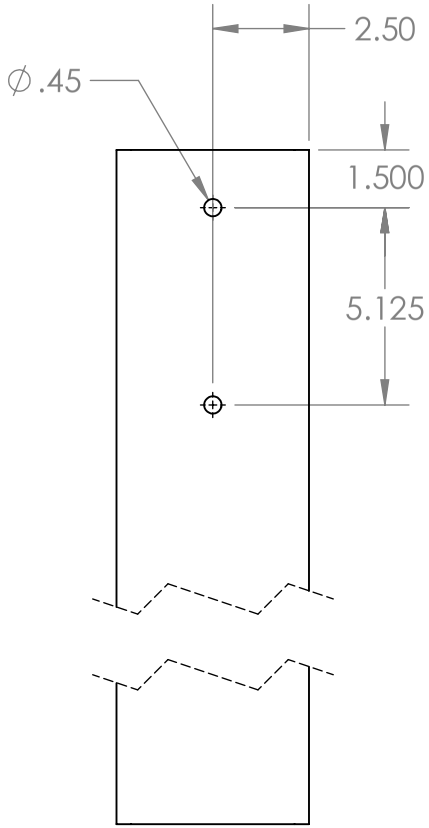
PROJECT: ZX60

TITLE: DRILLING PATTERN SOLAR SYSTEM 4IN POST

SIZE	DWG. NO.	REV
A	ZX60-02	1

SCALE: 1:5 | WEIGHT: | SHEET 1 OF 1





NOTE:

The installation of the solar system must be made using a bolt which passes through the post. Follow the this drilling pattern for the position of holes.

Drill holes on the 4 faces to facilitate the installation.

Tenon drilling schemes not shown here. See on next pages.

The fixture's tenon must be installed a minimum of 12" below the top of the post.

POLE NOT INCLUDED
Tenon drilling pattern not shown here.

REV.	DESCRIPTION	DATE	PAR
3	MODIFICATION OF THE NOTE	20 JUL 2021	JFOL
2	REFERENCE TO ZX170	12 JUL 2021	JFOL
1	MODIFICATION OF THE NOTE	5 JAN 2021	JFOL

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES

DEFAULT TOLERANCES:
ANGULAR ±1°
TWO PLACE DECIMAL ±.06"
THREE PLACE DECIMAL ±.031"
HOLES ±.005"

MATERIAL
Material <not specified>

THICKNESS
"

FINISH

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JFOL	30 sep 2020

VISION SOLAIRE

PROJECT: ZX100 & ZX180

TITLE: DRILLING PATTERN SOLAR SYSTEM 5IN POST

SIZE	DWG. NO.	REV
A	ZX100-02	3

SCALE: 1:5 | WEIGHT: 36.45 | SHEET 1 OF 1

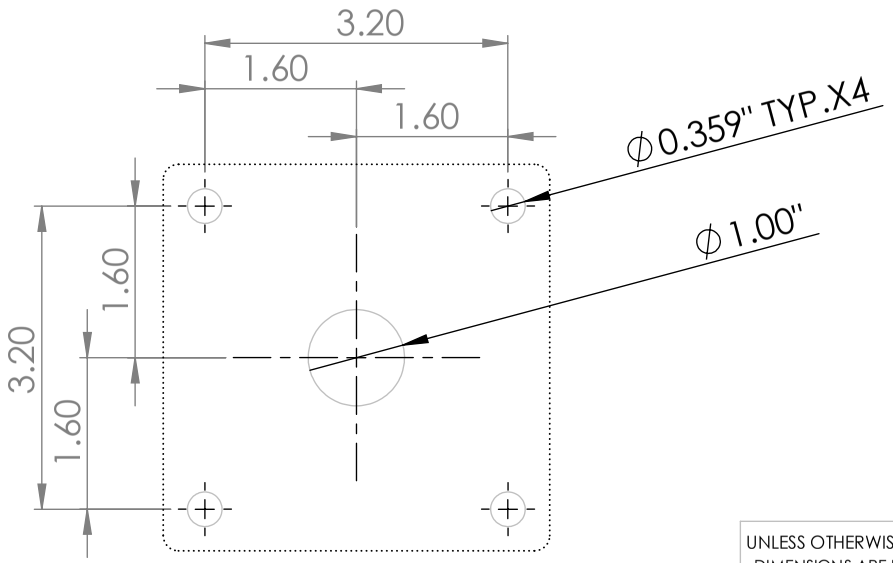
P.6/12

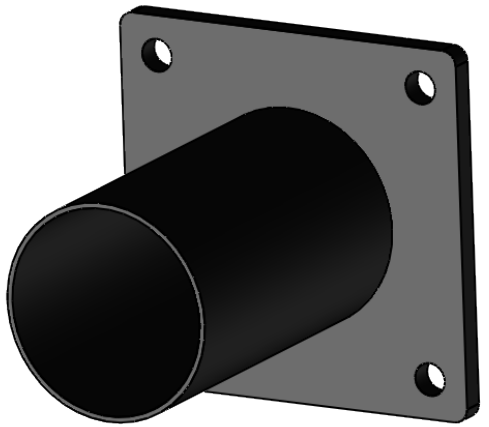
PROVIDED BY DEFAULT FOR THE ZX & TX SERIES WHEN NO OTHER OPTIONAL POLE ARM IS PURCHASED

HARDWARE 1/4-20X1" (4X) INCLUDED FOR INSTALLING THE TENON

PLEASE COORDINATE DRILLING HOLES WITH YOUR POLE MANUFACTURER. THE FIXTURE'S TENON MUST BE INSTALLED AT A MINIMUM DISTANCE BELOW BELOW THE TOP OF THE POST AS PER THE FOLLOWING TABLE:

DISTANCE MIN.	MODÈLE
12" (305mm)	ZX30 & ZX60
18" (457mm)	ZX100, ZX170, TX150 & TX300





PERCEMENTS

DIMENSIONS IN INCHES

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES	DRAWN	JFOL	2 AUG 2021
DEFAULT TOLERANCES:			
ANGULAR ±1°			
TWO PLACE DECIMAL ±.06"			
THREE PLACE DECIMAL ±.031"			
HOLES ±.005"			
MATERIAL: PAINTED STEEL			
THICKNESS: "			
FINISH:			
DO NOT SCALE DRAWING			

PROJECT: ZX - TX

TITLE: DRILLING PATTERN HORIZONTAL TENON FOR 4" & 5" SQUARE POLE

SIZE	DWG. NO.	REV
A	TENSQ45	1

SCALE: 1:2 | WEIGHT: | SHEET 1 OF 1

REV.	DESCRIPTION	DATE	PAR
1	MOUNTING LOCATION	25 MAI 2022	JFOL
0	ORIGINAL	2 AOUT 2021	JFOL

P.7/12

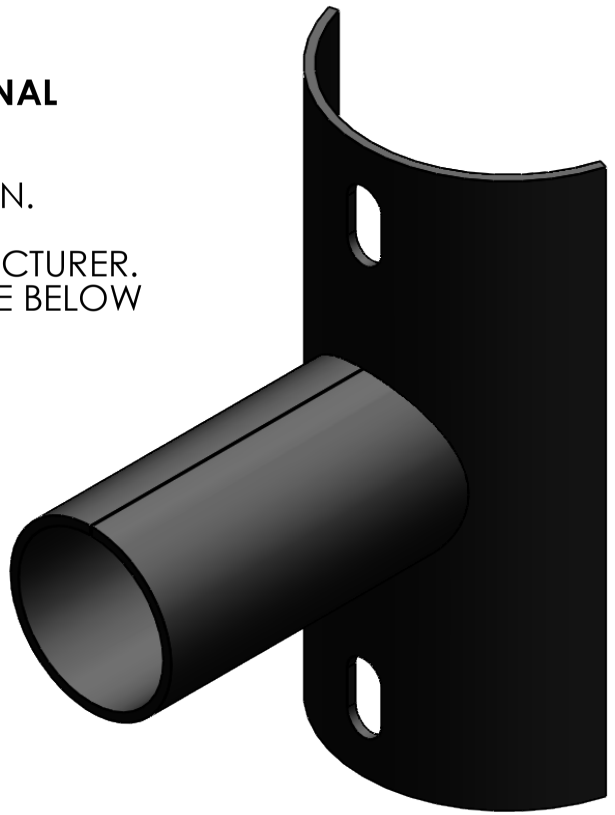
AVAILABLE FOR THE ZX30 & ZX60 ONLY.

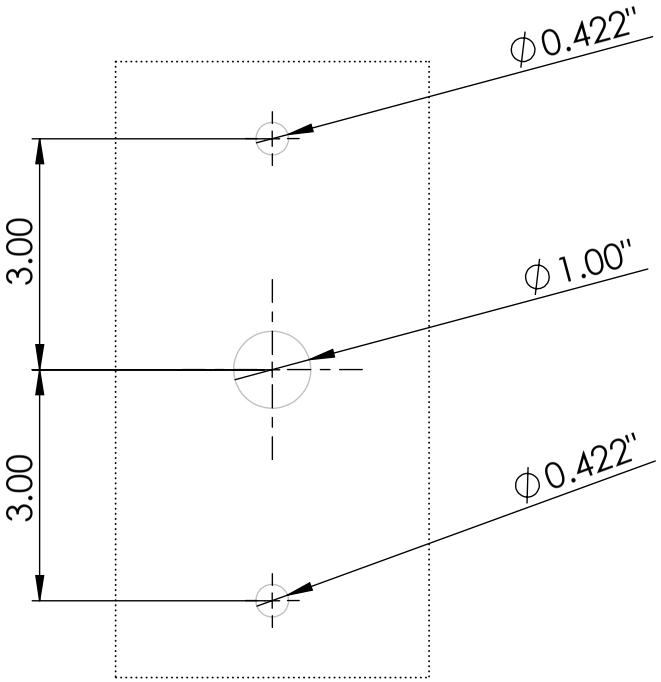
PROVIDED BY DEFAULT FOR ROUND POLE WHEN NO OTHER OPTIONAL POLE ARM IS PURCHASED.

HARDWARE 5/16-18X1" (X2) INCLUDED FOR INSTALLING THE TENON.

PLEASE COORDINATE DRILLING HOLES WITH YOUR POLE MANUFACTURER. THE FIXTURE'S TENON MUST BE INSTALLED AT A MINIMUM DISTANCE BELOW THE TOP OF THE POST AS PER THE FOLLOWING TABLE:

DISTANCE MIN.	MODEL
12" (305mm)	ZX30 & ZX60





DRILLING PATTERN

DIMENSIONS IN INCHES

REV.	DESCRIPTION	DATE	PAR
1	MOUNTING LOCATION	25 MAI 2022	JFOL
0	ORIGINAL	2 AUG 2021	JFOL

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES

DEFAULT TOLERANCES:
ANGULAR ±1°
TWO PLACE DECIMAL ±.06"
THREE PLACE DECIMAL ±.031"
HOLES ±.005"

MATERIAL: PAINTED STEEL

THICKNESS: "

FINISH:

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JFOL	2 AUG 2021

VISION SOLAIRE

PROJECT: ZX

TITLE: DRILLING PATTERN HORIZONTAL TENON FOR 4" ROUND POLE

SIZE	DWG. NO.	REV
A	TENRD4	1

SCALE: 1:2 | WEIGHT: | SHEET 1 OF 1

P.8/12

LED STREET LIGHTS

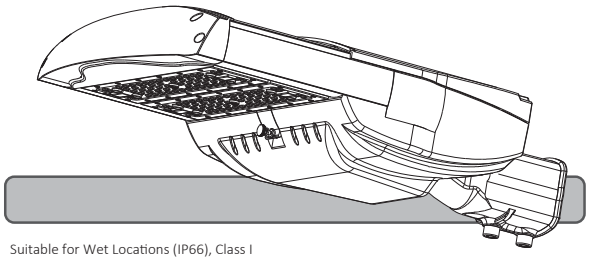
INSTALLATION INSTRUCTIONS

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. To avoid the possibility of electrical shock, turn off power supply before installation or servicing. Installation and servicing should be performed by qualified personnel.
2. When closing cover of fixture, be sure all wires are inside housing to avoid pinching wires.
3. Product must be installed in accordance with your local electrical code. If you are not familiar with these codes and requirements, consult a qualified electrician.
4. Do not change the structure or any components of the fixture to ensure safety.

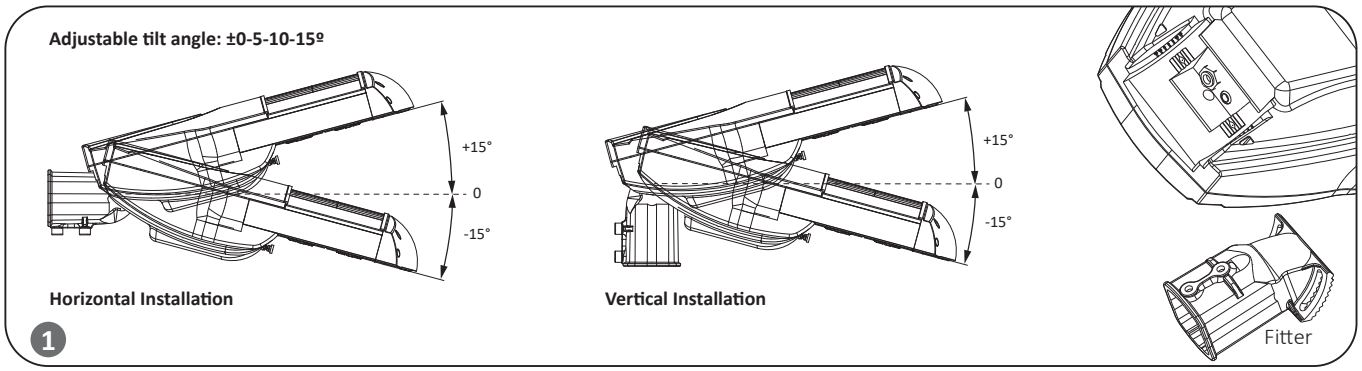


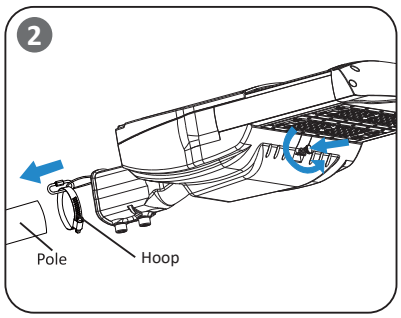
Suitable for Wet Locations (IP66), Class I

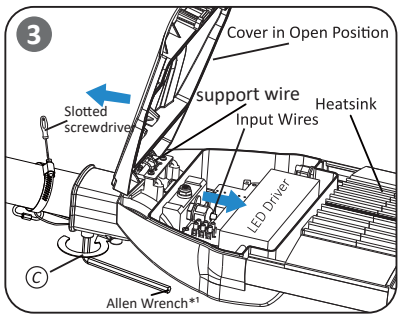
Power	*Modules*	*Dimension*	*EPA*	*Weight*
11W/15W/25W/35W/45W/60W	1	18.8"x12.4"x5.5"	1.7 pi²	12.7 lb

SAVE THIS INSTRUCTIONS FOR FUTURE REFERENCE

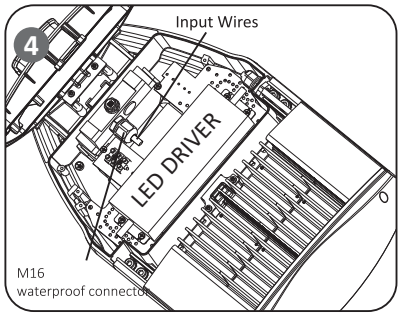
TO INSTALL:

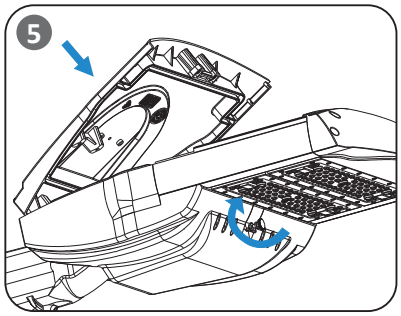






*1Allen Wrench: 8mm





STANDARD MOUNTING

STEP 1:

Adjust the multi-angle fitter (**0, 5 ,10, 15 degree vertical** and **0, 5,10, 15 degree horizontal**) to proper position by 8mm allen wrench.

STEP 2:

Loosen the limit screw counterclockwise,press the screw to open the cover of driver box, make sure the support wire falls in the limit groove.

STEP 3:

Insert the pole and external power cord into the luminaire cavity and hoop of Anti-falling rope.Thread the power cord through the M16 wiring harness retainer. Reserve the related length of wire for connection. Once desired position is achieved, tighten (2) mounting bolts **(see Ⓒ)**. Recommended torque: 17Nm ± 1Nm.

STEP 4:

Connect the **Input Wires** into **Terminal Block**, Reference "**Electrical Connections**" section for completing electrical connections. **Tighten the M16 water-proof connector, Make sure the input wires do not move.**

STEP 5:

Close the cover, tighten the limit screw clockwise.

STEP 1 / Étape 1:
Determine if you have a terminal block with 3 or 4 positions :
Déterminer si vous avez un terminal block à 3 ou 4 positions :

STEP 2 / Étape 2:
Make the following Electrical Connections :
Effectuer les raccordements électriques suivants :

a. Connect **INPUT POSITIVE(+)** conductor to **RED WIRE** position of the terminal block or POSITIVE(+) conductor of LED driver.

b. Connect **INPUT NEGATIVE(-)** conductor to **BLACK WIRE** position of the terminal block or Vin NEGATIVE(-)/DIM (-) conductor of LED driver.

c. Connect **INPUT DIM SIGNAL (WHITE WIRE)** to Dim (+) signal wire (blue) of LED Driver (0-10V).

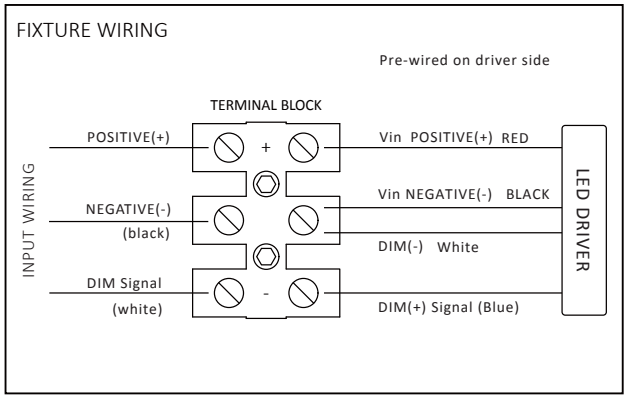
STEP 3:
Make sure all excess input wires are pushed into pole, screws are tightened.

STEP 4:
Close cover by firmly pushing cover towards fixture, making sure that no wires are pinched and Sealing gasket are fully engaged.

STEP 5:
If the fixture is without a terminal block, please insulate all electrical connections with wire nuts suitable for at least 90°C

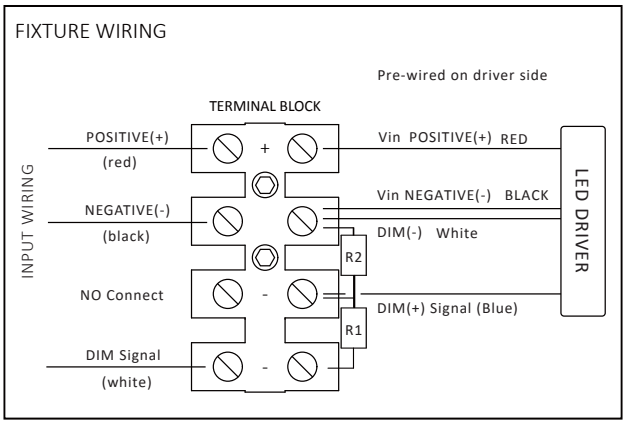
3 POSITIONS TERMINAL BLOCK
TERMINAL BLOCK 3 POSITIONS

Without voltage divider resistors



4 POSITIONS TERMINAL BLOCK
TERMINAL BLOCK 4 POSITIONS

With voltage divider resistors for base Dim % settings
* Avec diviseur de tension pour réglage du % de gradation de base.



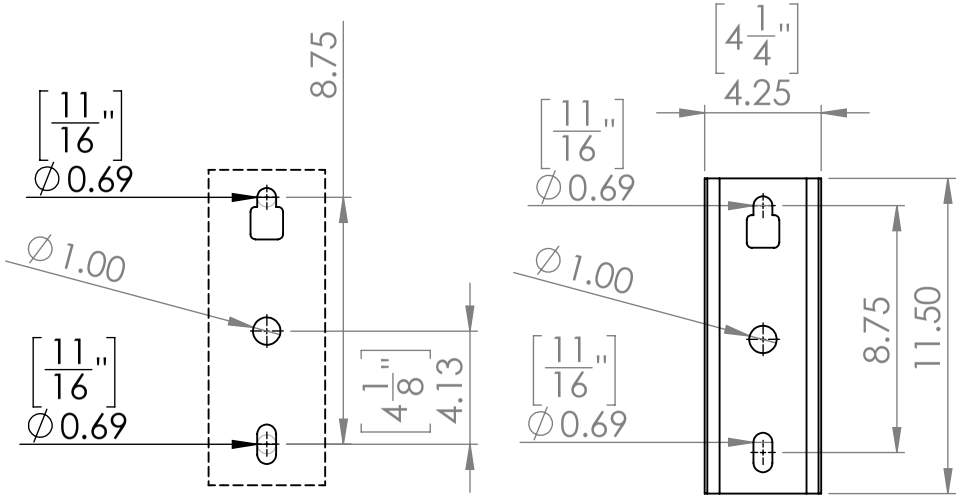
This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

OPTIONAL ELLIPTICAL POLE ARM #RE2MA AVAILABLE FOR THE ZX & TX SERIES.

HARDWARE 5/8-11X 3" (X2) INCLUDED FOR INSTALLING THE POLE ARM.

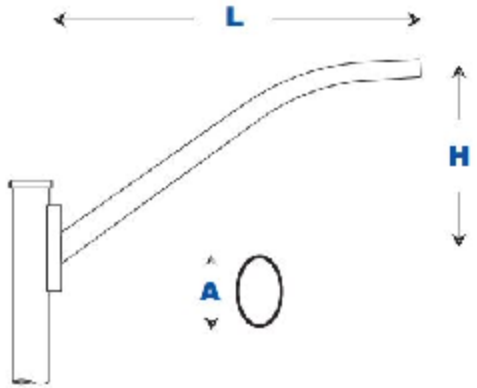
PLEASE COORDINATE DRILLING HOLES WITH YOUR POLE MANUFACTURER.
THE FIXTURES'S POLE ARM MUST BE INSTALLED AT A MINIMUM DISTANCE BELOW THE TOP OF THE POST AS PER THE FOLLOWING TABLE. THE DISTANCE REFERS TO THE BRACKET TOP MOUNTING HOLE.

DISTANCE MIN.	MODEL
18" (457mm)	ZX100, ZX170, TX150 & TX300



DRILLING PATTERN

BACK



L = 24"
H = 12"
A = 2.5" x 3.375"
DIAM. EXT. = 2.375"
THICKNESS = 0.125"

DIMENSIONS IN INCHES

REV.	DESCRIPTION	DATE	PAR
2	DIMENSIONS ADJUSTED	16 MAR 2023	JFOL
1	MOUNTING DETAIL & FRACTIONAL MEASUREMENTS	19 SEP 2022	JFOL
0	ORIGINAL	26 MAI 2022	JFOL

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES

DEFAULT TOLERANCES:
ANGULAR ±1°
TWO PLACE DECIMAL ±.06"
THREE PLACE DECIMAL ±.031"
HOLES ±.005"

MATERIAL: 6063-T6 ALU.
THICKNESS: 0.125"
FINISH: BLACK
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JFOL	26 MAI 2022

VISION SOLAIRE

PROJECT: ZX - TX

TITLE: DRILLING PATTERN ELLIPTICAL POLE ARM 2'

SIZE	DWG. NO.	REV
A	RE2MA	2

SCALE: 1:25 | WEIGHT: | SHEET 2 OF 2

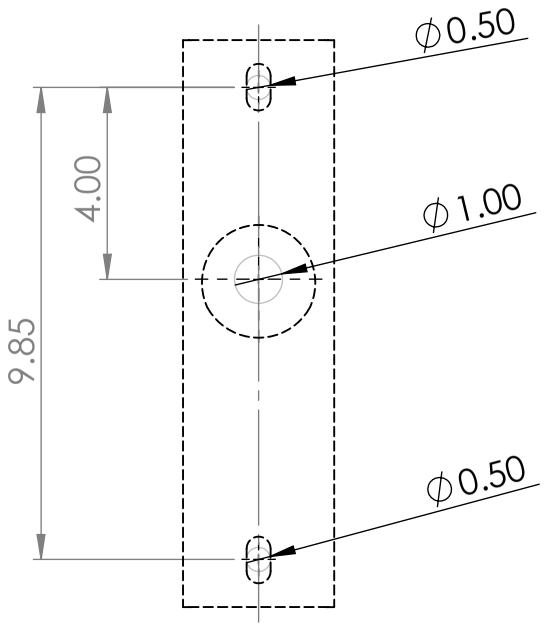
P.11/12

OPTIONAL STRAIGHT POLE ARM AVAILABLE FOR THE ZX & TX SERIES

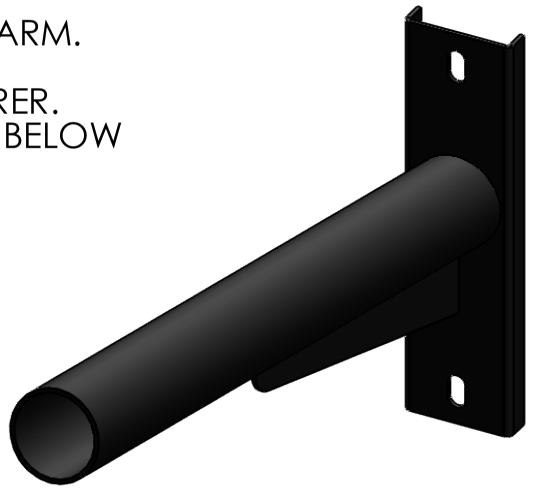
HARDWARE 3/8"-16X 1-3/4" (2X) INCLUDED FOR INSTALLING THE POLE ARM.

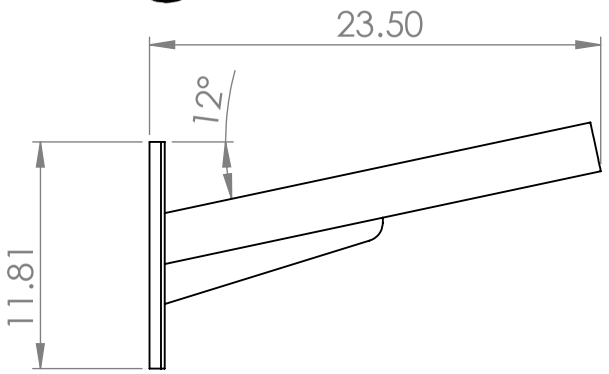
PLEASE COORDINATE DRILLING HOLES WITH YOUR POLE MANUFACTURER.
THE FIXTURE'S POLE ARM MUST BE INSTALLED AT A MINIMUM DISTANCE BELOW THE TOP OF THE POST AS PER THE FOLLOWING TABLE:

DISTANCE MIN.	MODEL
12" (305mm)	ZX30 & ZX60
18" (457mm)	ZX100, ZX170, TX150 & TX300



DRILLING PATTERN





DIMENSIONS IN INCHES

REV.	DESCRIPTION	DATE	PAR
2	MOUNTING LOCATION	25 MAY 2022	JFOL
1	DIMENSIONS UPDATE	4 MAY 2022	JFOL
0	ORIGINAL	2 FEV 2022	JFOL

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES

DEFAULT TOLERANCES:
ANGULAR ±1°
TWO PLACE DECIMAL ±.06"
THREE PLACE DECIMAL ±.031"
HOLES ±.005"

MATERIAL
PAINTED STEEL

THICKNESS
"

FINISH

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	JFOL	2 FEV 2022

VISION SOLAIRE

PROJECT: ZX - TX

TITLE: DRILLING PATTERN 2 FT ARM @ 12DEG FOR 4" & 5" POLE

SIZE	DWG. NO.	REV
A	RD212	2

SCALE: 1:2 | WEIGHT: | SHEET 1 OF 1

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