

TVILIGHT



English

OPENSKY

Zhaga IoT

Installation Manual

PR166202





ATTENTION:

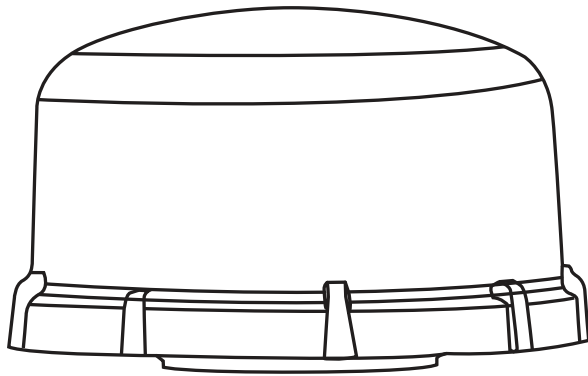
- ☐ In order to function properly, OPENSKY Zhaga IoT **must** be connected to a dimmable DALI driver/ ballast (preferably D4I or SR compliant).

NOTE: Some dimmable drivers/ballasts **must** be programmed/set to DALI mode. Also, select the correct configuration (i.e. DALI) from the CMS. If this has not been done, OPENSKY Zhaga IoT will not be able to dim the connected armature.

DALI (logarithmic) dimming mode is recommended.

In box:

OpenSky Zhaga IoT



TVILIGHT

Beechavenue 162-180, 1119 PS, Schiphol-Rijk, the Netherlands
Designed in the Netherlands. Assembled in PRC.

Zhaga IoT

Input: 18-30 Vdc
Output: 0 - 10V/ DALI/ SR/ D4I
RF: EGPRS/LTE Cat M1/Cat NB2
ta : -40°C... +70°C



740215000AC

Zhaga OLC device comes with two QR Code labels:

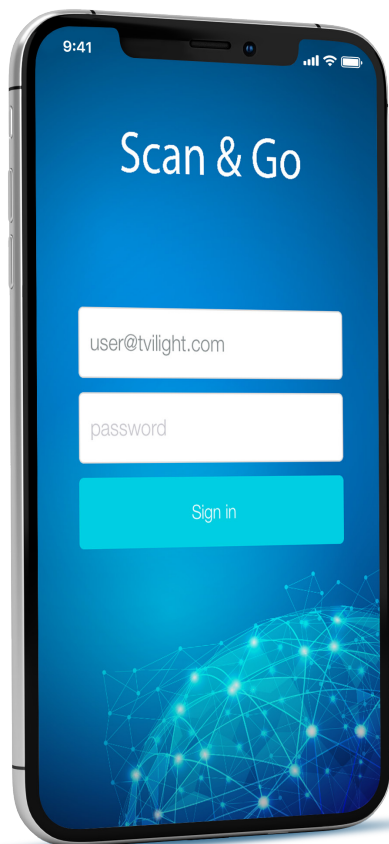
1. Please stick one label on the street light luminaire.
2. Please stick the second label on the street pole, preferably inside the junction box.

QR Code needs to be scanned once using Tvilight Scan & Go App (please see the instructions below)



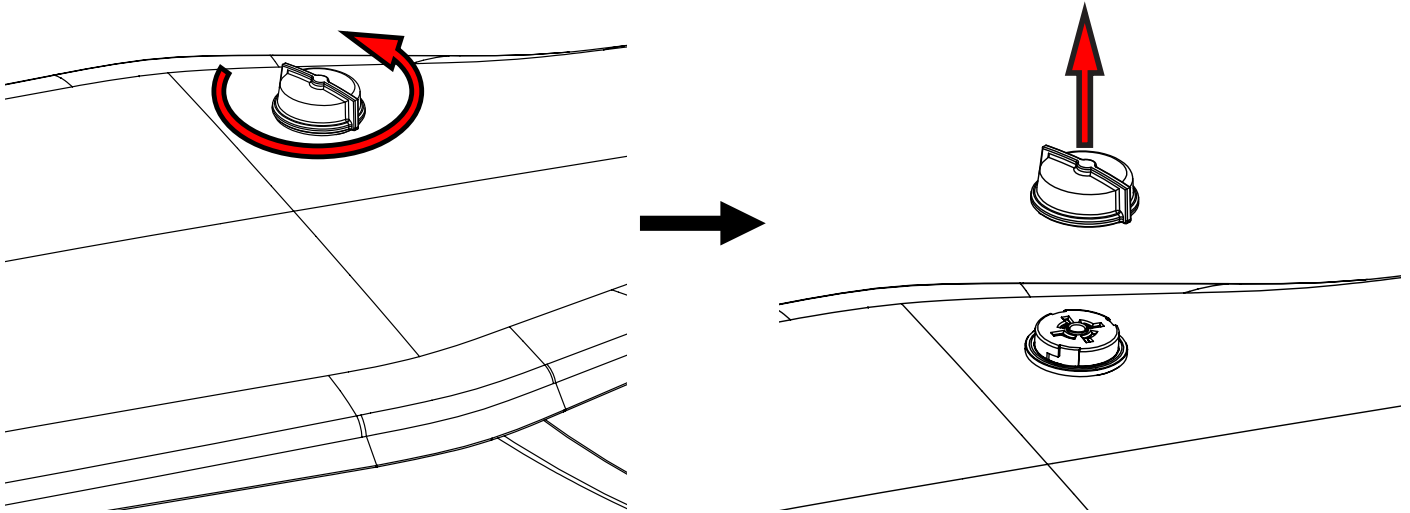
Register device to CityManager (CMS)

1. Download Twilight Scan & Go from Apple iOS App Store or Android PlayStore.
2. Login with your Username and Password.
3. Use the 'Add device' function in the Scan&Go app to add the device to CityManager.
4. The Device Name (OpenSky Zhaga IoT), Serial Number/ QR Code (UID) and Comments can be added manually.
5. The Device Serial Number can also be added using the Scanner function which is activated by tapping the camera icon in the app.
6. For more information on how to use Scan&Go app, please visit:
<https://www.tvilight.com/scan-go/>
7. To create your user account, please email helpdesk@tvilight.com. Please add your customer name, project reference, and purchase order number.



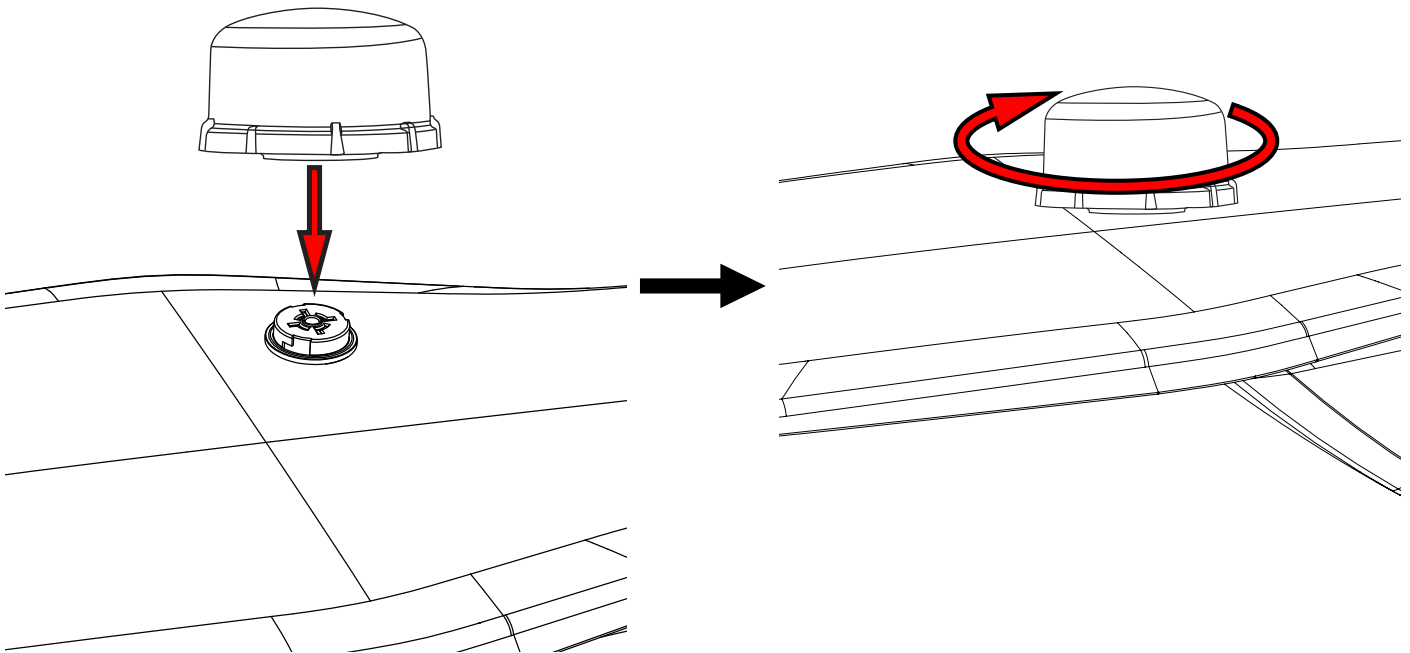
1. Remove Sealing Cap from the Zhaga Receptacle

NOTE: The receptacle, and therefore the OpenSky Zhaga, must be mounted on the top side of the luminaire.



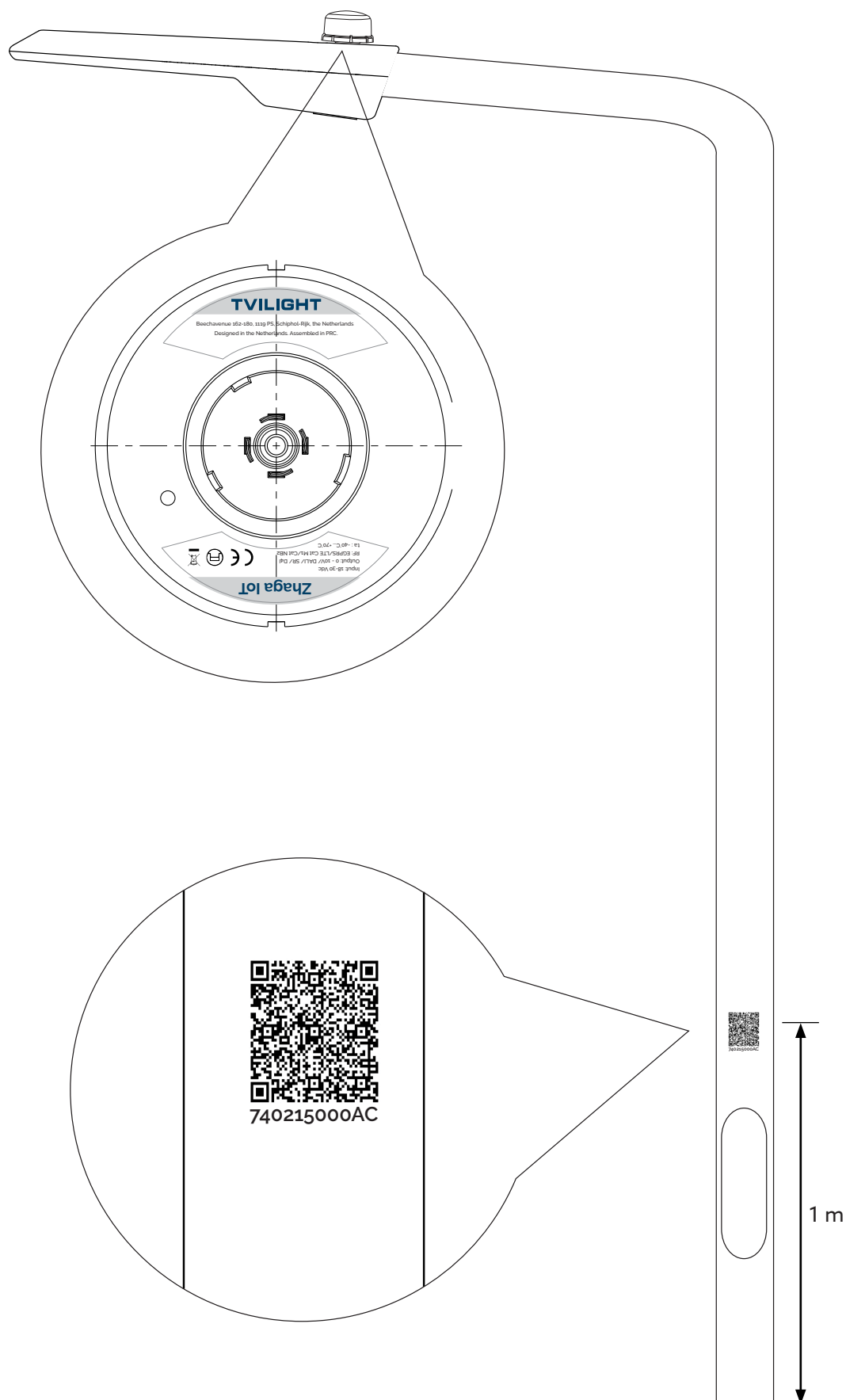
2. Connect OpenSky Zhaga IoT

Press OpenSky Zhaga IoT onto the Zhaga Receptacle and twist to lock in place.



3. Apply Pole ID Label to the pole

Ensure that the Product and Pole ID Labels match.



Appendix : Zhaga Receptacle Mounting and Wiring Specification

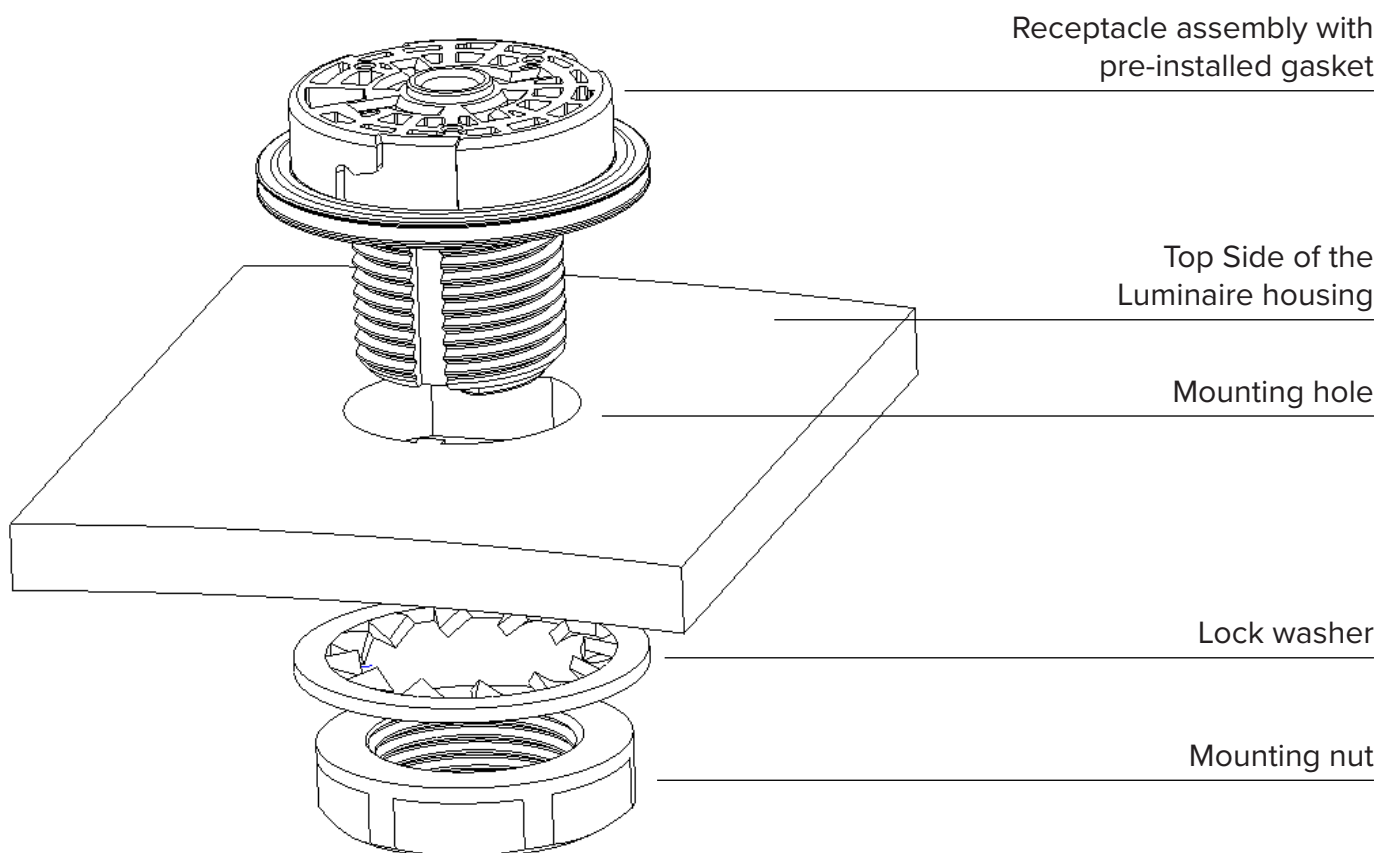
NOTE: The content in this Appendix is derived from the [TE LUMAWISE Endurance S Connector System Application Specification 114-133074](#) (12 May 17 Rev 3). For more detailed installation instructions consult the latest TE Application Specification document.

A1. Mounting

A surface shall be provided on luminaire housing that is ideally flat. If a flat surface is not possible a secondary possibility is to have a flat surface in one direction and a minimum radius in the other of 500mm to mount the receptacle. To provide a water tight mounting seal, the luminaire surface must be free of dirt, debris, or burrs. Sealing gasket provided with the receptacle assembly must be used.

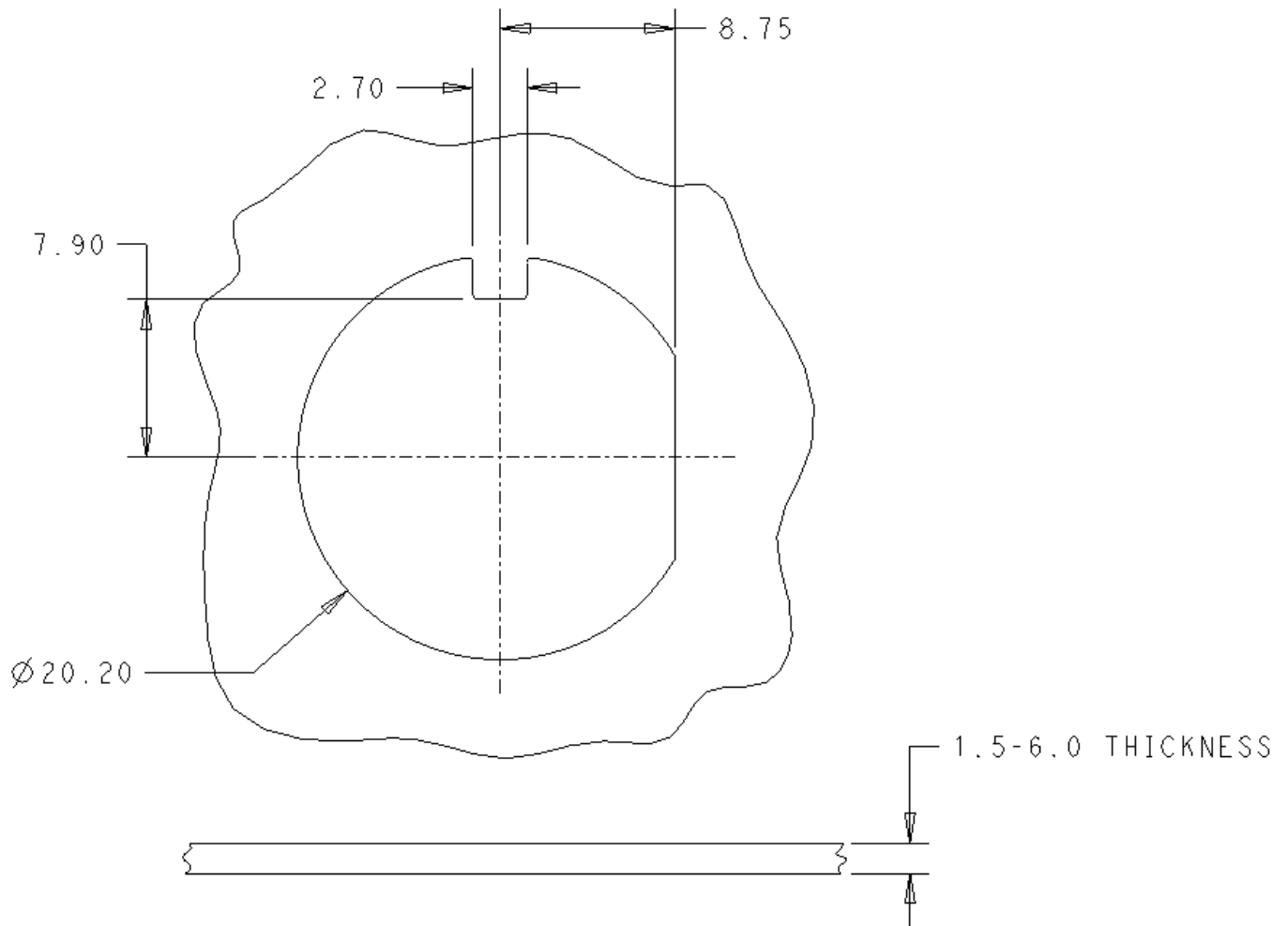
Receptacle can be used on a luminaire housing thickness between 1.5mm to 6.0mm. When mounting receptacle assembly, it must not rotate during locking washer and locking nut application. Torque mounting nut within the range of 1.8 to 2.4 N-m using a 27mm hex socket.

The location of the hole must be on the top side of the luminaire.



A2. Mounting Hole Pattern

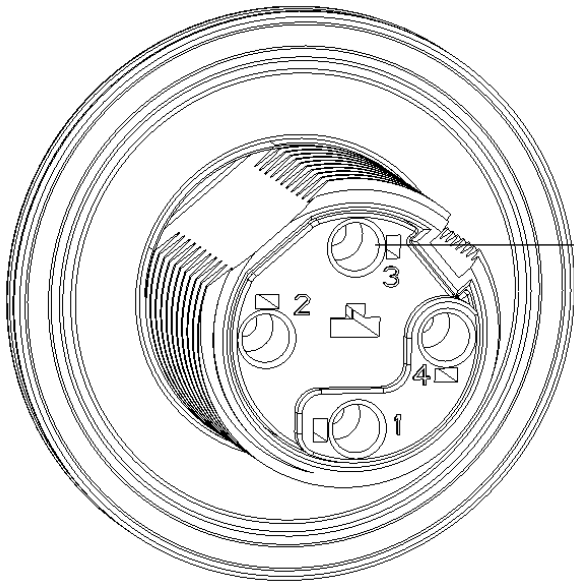
The recommended mounting hole can be seen below. Refer to product drawing for additional details.



NOTE: Variations to the recommended mounting hole are possible but must be verified by the end user to ensure they do not result in excessive movement of the receptacle assembly during mounting or use. Excessive movement could result in reduced system performance. An absolute maximum hole diameter of 22.0mm should be used.

A3. Wire Locations

The receptacle is wired on the bottom side of the assembly; access from the inside of the luminaire. Wire entry locations are labelled 1, 2, 3, and 4. Corresponding contact designations are marked the same on the module bases for PCB alignment.



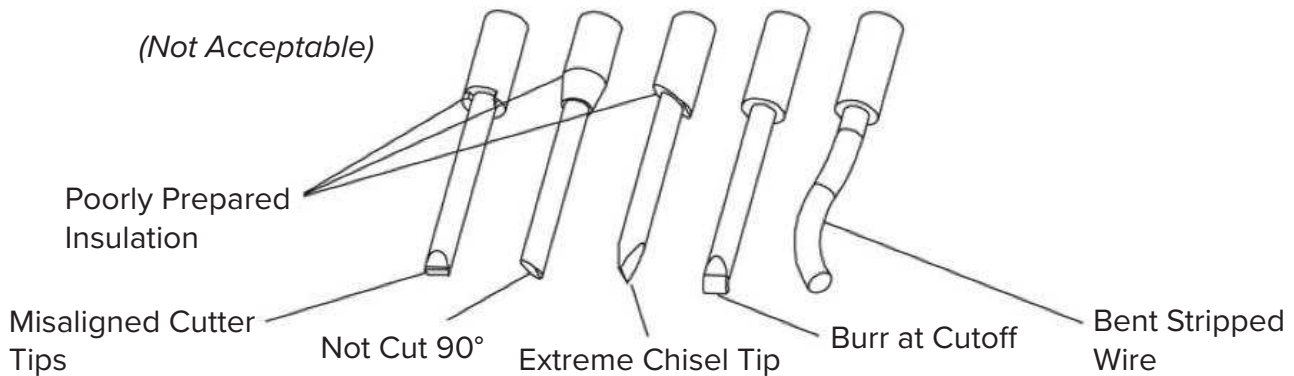
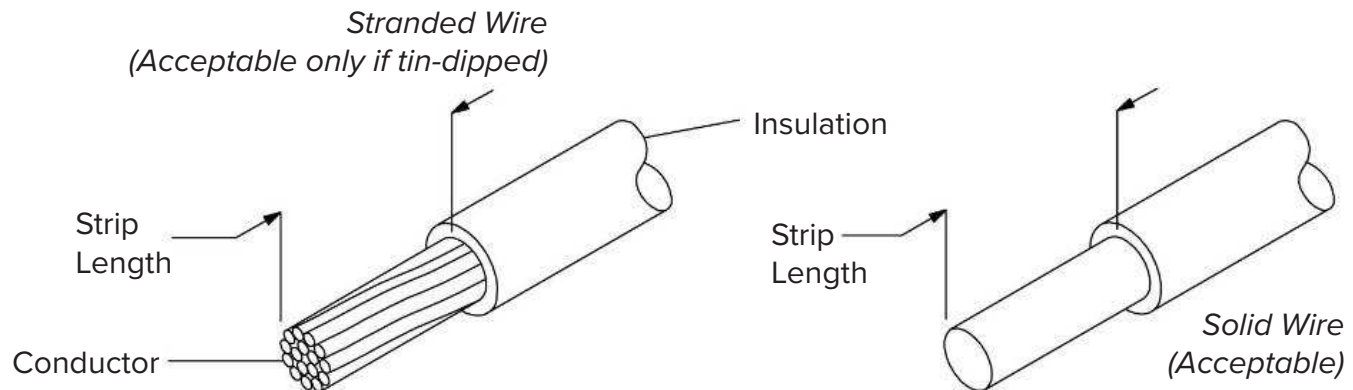
Receptacle assembly with pre-installed gasket

Pun Number	Function
1	+24V power supply
2*	Negative pole for DALI or DALI based protocol and shared GND return for 24V power supply
3	Positive pole for DALI or DALI based protocol
4	LSI sensor input

* Please ensure to connect the DALI+ and DALI- wires correctly. DALI- is shared with the Device GND line.

A4. Wire Selection and Preparation

The receptacle assembly will accept 16 through 20AWG solid and 18 through 20AWG stranded tin-dipped copper wire only. The table in Figure 5 provides wire selection for the Poke-In Connectors.



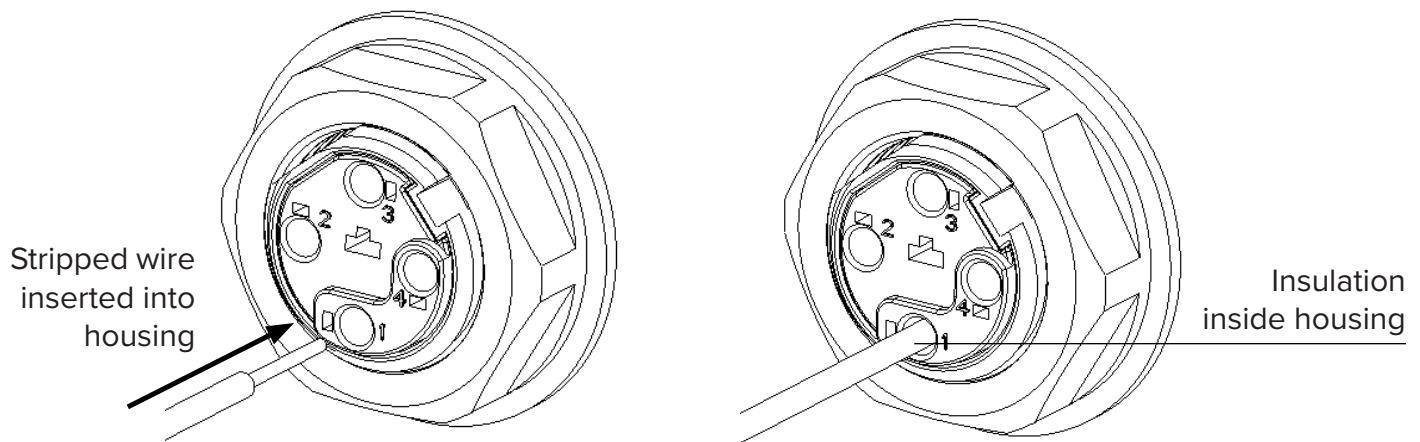
Recommend Wire			
Wire Size	Wire Type	Insulation Diameter	Strip Length
16 AWG	Solid	ø2.95 MAX ø1.90 MIN	11.0 ±1.0
18 AWG	Solid		
	Stranded (tin-dipped)		
20 AWG	Solid		
	Stranded (tin-dipped)		

NOTE: Recommended maximum insulation diameter should be as provided in Figure 5. Wires with larger insulation diameters will not fit within the housing's poke-in hole insulation tunnel. Wires utilizing semi-rigid insulation are recommended to minimize movement of the insulation along the axis of the wire. Movement of the insulation will result in variation of the wire strip length which can lead to incorrect wire termination.

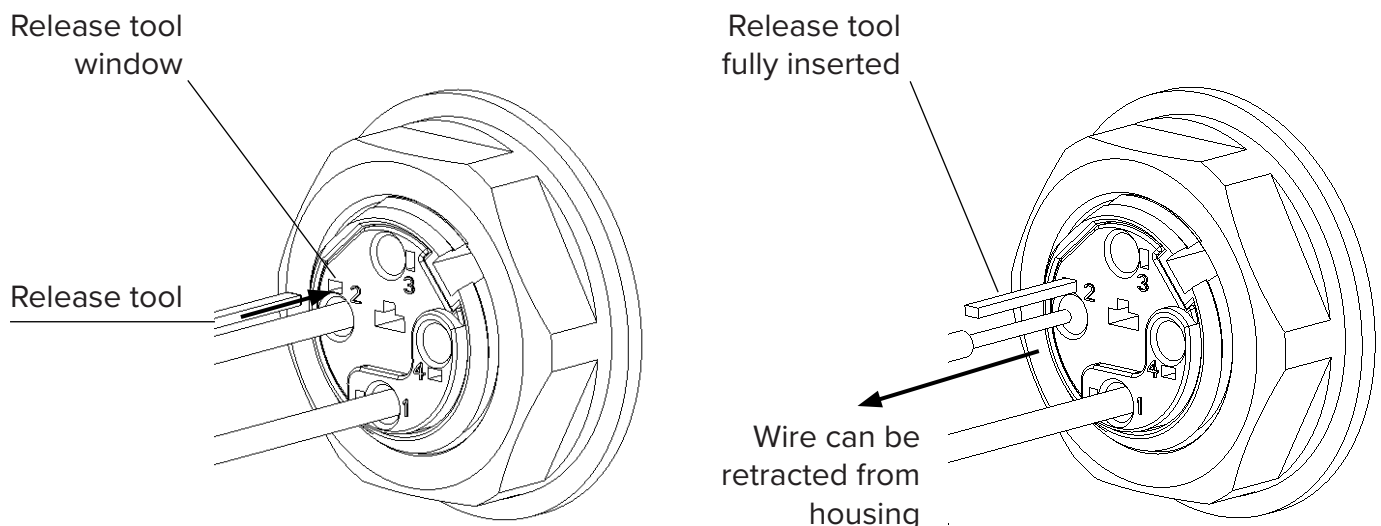
A5. Wire Termination

All wires must be pushed firmly inside the contact wire openings. The wires must be fully inserted so that the wire insulation is inserted between three and five millimeters into the rear of the housing.

The required wire termination depth is achieved when the wire has bottomed in the connector housing. Connector design has an internal wire stop.



A fully inserted wire can be extracted from the receptacle using a tool and the release tool window located on the bottom of the receptacle housing. Using tool tip that is 0.8mm x 1.4 mm in cross section and 16.0mm long, insert it into the window (one per wire) and open the contact beams. The wire may then be extracted from the connector along the axis of wire insertion direction.



CAUTION: Extraction device to be free from burrs and sharp edges to ensure no damage is done to connector terminals.



CAUTION: A new stripped wire must be re-inserted into cavity after extraction of existing wire. DO NOT re-use extracted wire.



DANGER: Extreme caution to ensure there is no power in the system prior to insertion of wire extraction device. Electrical shock or system damage can result if care is not taken.

Getting started

1. Ensure that the device is pre-registered through Twilight Scan & Go App
2. Ensure that the device is installed properly as per the steps mentioned previously
3. Turn ON the power
4. The device starts to initialize, and the red LED (visible inside the device window) will flash (blink). Blinking Red LED is a good sign; it shows the device is alive.
5. The device tries to register to the local telecom network and the green LED will flash. It may take several minutes. First time sim card connectivity can take between 30 minutes to 8 hours depending on your country and the OLC location. So, please have patience!!
6. The device should now be online on CMS and the green LED will turn to solid green. The device should now be online on CMS
7. Use your login (same as Scan & Go app) or other user account provided by Twilight Support Desk to login to the CityManager CMS (<https://twilight.io/>)
8. You are ready and connected. Enjoy energy savings and smart maintenance notifications!

LED status

Blinking Red	Device running normally
Solid Green	Connected to Server

Troubleshooting

1. If the Red LED (inside the small window) does not blink

This can be due to lack of power:

1. Please ensure to turn ON power from the circuit breaker.
2. Please check if the streetlight luminaire is working.
3. Check if the wires are properly connected.
4. Ensure that the device is locked/ properly connected on the Zhaga receptacle

2 If the device shows flashing/ blinking GREEN LED (after powering the device for at least 8 hours)

This means that the device is not able to connect to the CMS server.
This can be due to the following reasons:

1. The device is not yet registered in the Tvilight CMS. Please get it registered using the Scan & Go app (see instructions above).
2. There is no sim card network reception on the device location.
(Please note that the sim connection can take as much as 8 hours when used for the first time in your region.)
3. If the above steps did not resolve the issue, then please contact Tvilight support desk (helpdesk@tvilight.com)

3 Tried everything/ faulty device?

We are very sorry. Please contact: support@tvilight.com for further instructions and send the device for (RMA) replacement.

Further support

We are here for you! Please contact us at helpdesk@tvilight.com, our preferred partner JIRA portal or <https://www.tvilight.com/support/>

**Thank you for purchasing
TVILIGHT**

**We are proud of your contribution with making our world
Greener and Safer!!**