



NOTE

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ± 0.13 mm and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of LUMAWISE Endurance N Tool-less Rotatable Dimming Receptacles typically used for roadway and area lighting, which conform to ANSI C136.41-2013. Just as the name implies, this receptacle is designed such that it may be assembled to the luminaire housing without any tools; and, once mounted, rotatable without tools. All contacts are pre-installed into the receptacle housing and pre-terminated lead-wires. The 3-line voltage AC circuits are wired with 14AWG stranded, while the 4-signal dimming control voltage DC circuits are wired with 18AWG stranded wire. Receptacle assemblies are available with both 105°C and 150°C rated wire, and are also available with either 2 or 4 dimming control pad-style contacts. corresponding with TE Connectivity (TE) Personnel, use the terminology provided in this specification to facilitate inquiries for information. Basic terms and features of this product are provided in Figure 1.

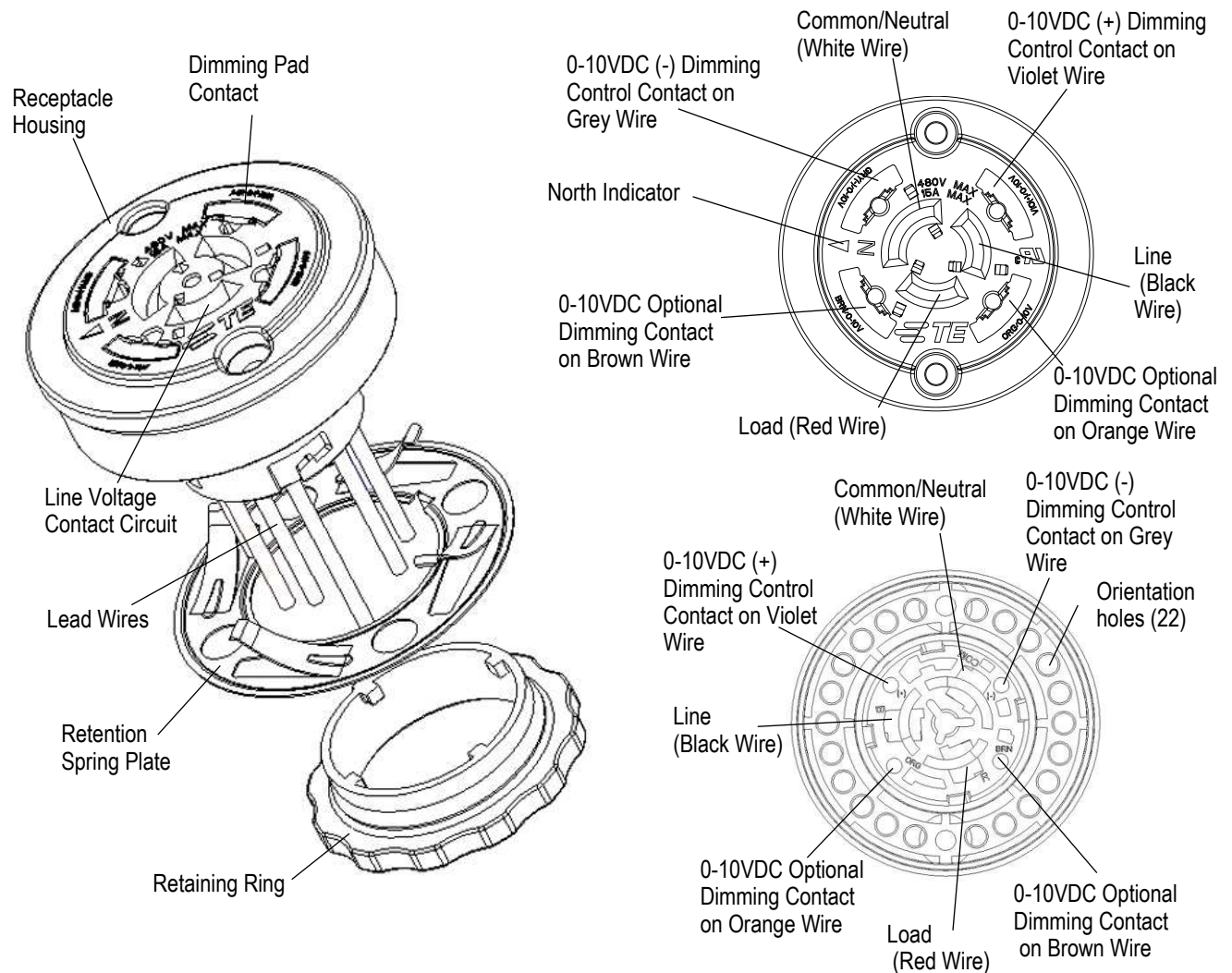


Figure 1

2. REFERENCE MATERIAL

2.1 Revision Summary

New document

2.1. Customer Assistance

Product Base Part Number 2332966-[] and Product Code L937 are representative of the ANSI C136.41-2013 Dimming Receptacles. Use of these numbers will identify the product line and help you to obtain product and tooling information. Such information can be obtained through a local TE Representative, by visiting our website at www.te.com, or by calling PRODUCT INFORMATION or the TOOLING ASSISTANCE CENTER at the numbers at the bottom of page 1.

2.2. Drawings

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, the information contained in the Customer Drawings takes priority.

2.3. Specifications

Tentative Product Specification 108-133114 provides product performance and test information for the LUMAWISE Endurance N tool-less rotatable receptacle.

3. REQUIREMENTS

3.1. Safety

Perform all wiring of receptacle with power turned OFF.

3.2. Limitations

The connectors are designed to operate in a temperature range of -40° to +85°C [-40° to +185°F].

3.3. Materials

The housing and retaining ring are made of UL 94V-0 rated thermoplastic. The line voltage contacts are made of copper alloy plated overall with tin. Dimming pad contacts are made of copper alloy with gold plating in contact pad area, tin plated in wire crimp area with nickel under-plate on entire contact. The retention spring is made of stainless steel.

3.4. Storage

A. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

B. Chemical Exposure

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur	Nitrites	Tartrates

3.5. Handling

The receptacle assembly is supplied with crimped contacts pre-installed. Take precautions not to damage the gold-plated surface of the exposed dimming contact pads. Also, take precaution not to nick the lead wire insulation during subsequent manufacturing and installation operations.

3.6. Receptacle Mounting

A. Mounting

1. Tool-less Mounting Option

A customized luminaire sealing surface as depicted in the below picture is required to interface with the receptacle assembly. Contact TE Connectivity for acceptable alternative sealing surface designs. A gasket must be used between the receptacle and luminaire casting to achieve water tight mounting as well as achieve a properly mounted receptacle. The gasket is not supplied with the receptacle assembly, but may be attained from TE Connectivity under part number 2332473-1.



NOTE

Use of improper gasket will potentially impair the sealing functionality of the receptacle assembly.

The luminaire mounting surface has two receptacle orientation posts located 180° apart. Align two of the four holes in the gasket with the luminaire casting posts while ensuring the gasket is against the luminaire casting sealing surface. Feed the receptacle assembly lead wires thru the mounting hole of the luminaire. The rear face of the receptacle housing has 22 evenly spaced orientation holes which accept the two luminaire posts. Continue to feed the rear portion of the receptacle housing through the luminaire mounting hole, while ensuring the two luminaire posts align with any two opposing holes on the rear portion of the connector. Reference Figure 2.

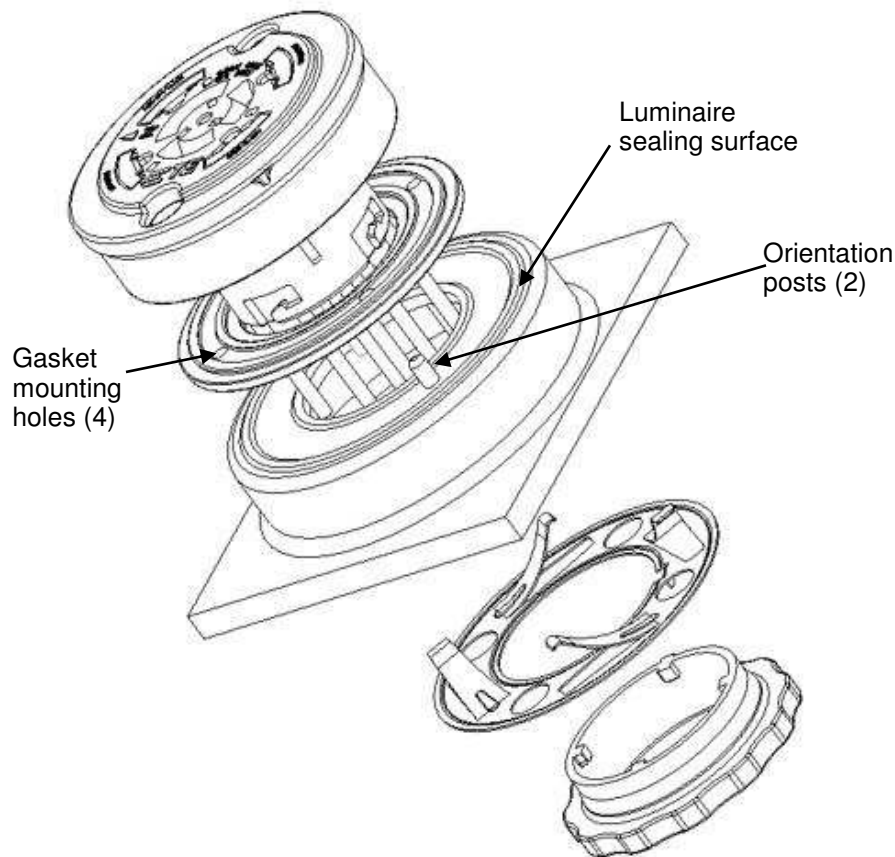


Figure 2

Hold the receptacle against the luminaire gasket for the next assembly steps. Turn the luminaire casting upside-down to expose the inside surface of the casting. The casting has four posts on the inside surface which accept the four holes of the Tool-less receptacle spring. With the spring beams facing towards the inside surface of the casting, place the spring onto the casting while aligning the spring holes with the casting posts. Next place the retaining ring onto the rear portion of the receptacle housing. Rotate the retaining ring until the four male bayonet features of the retaining ring align with the four female bayonet features on the receptacle. Push the retaining ring towards the casting and rotate it counter-clockwise until the retaining ring is locked in place. The assembly process is now complete. To disassemble, push down on the retaining ring toward the receptacle housing, then rotate it counter-clockwise to disengage it from the housing. Note the receptacle assembly is designed such that the retention spring provides pre-loaded force in the assembled position to ensure the gasket provides adequate sealing protection, keeping the receptacle, gasket, and luminaire surface tight against each other. Reference Figure 3B.

Note: When assembling retaining ring and spring plate to receptacle housing, ensure the stop features on both components are not vertically aligned resulting in an interference condition. Reference Figure 3A.

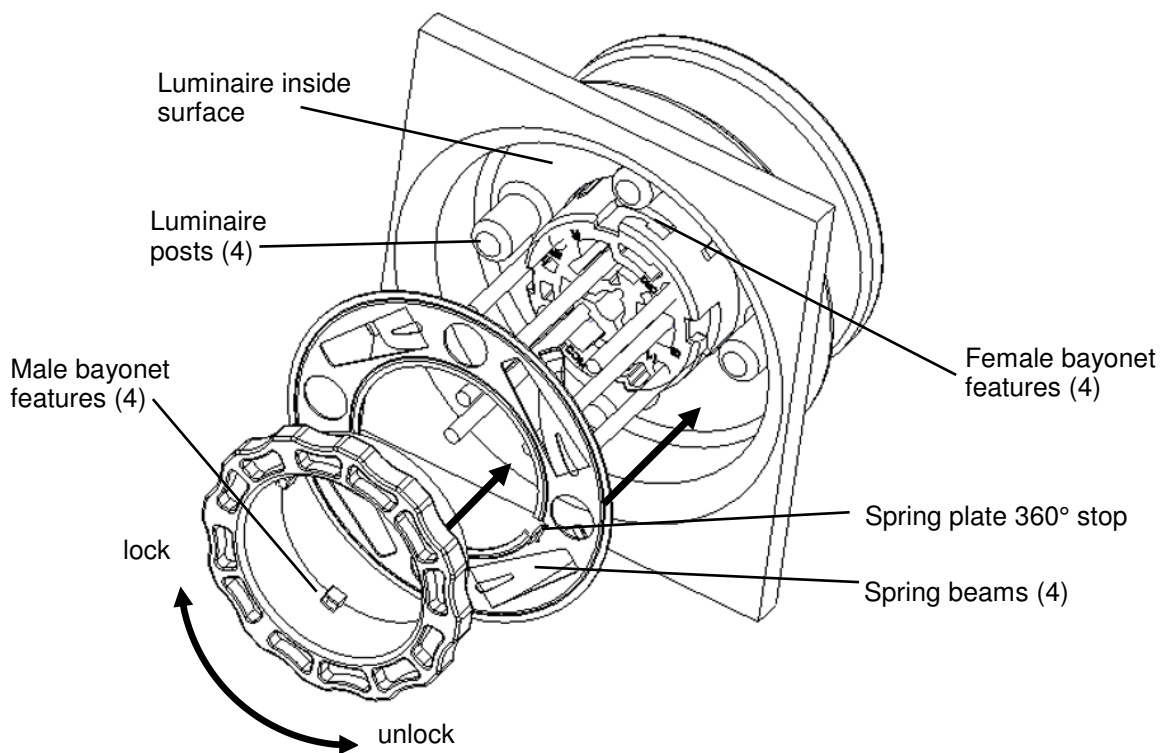


Figure 3A

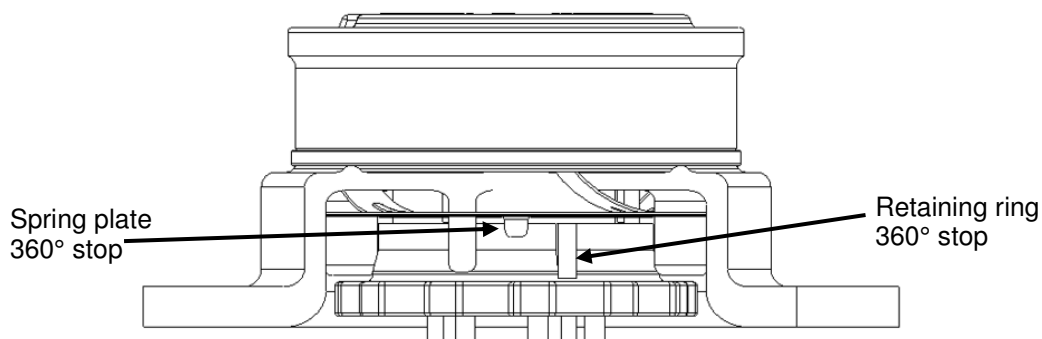


Figure 3B

2. HARDWARE MOUNTING OPTION

A flat mounting surface shall be provided on the luminaire housing to mount the receptacle assembly. To provide water-tight mounting, it is highly recommended that a gasket (not provided with receptacle assembly) be used to seal surfaces between the receptacle assembly and the luminaire housing. The receptacle housing has two mounting holes which accept #8 size flat-head recessed screws. Screws of the appropriate length and type must be determined by the luminaire manufacturer. When using the TE Gasket (P/N 2213469-1 or 2324246-1), a screw torque of 1.0 to 2.0 N-m is recommended. Do NOT exceed 3.0 N-m. **If a non-TE gasket is used, it is the responsibility of the installer to determine the mounting screw torque to ensure a rain-tight gasketed seal between the receptacle and luminaire housing.** Reference Figure 4.

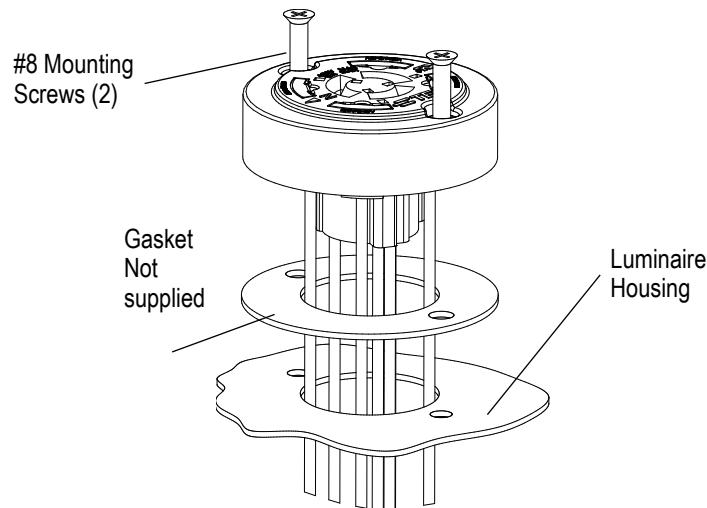


Figure 4

a. Mounting Hole Pattern

The recommended mounting hole pattern is shown in Figure 5.

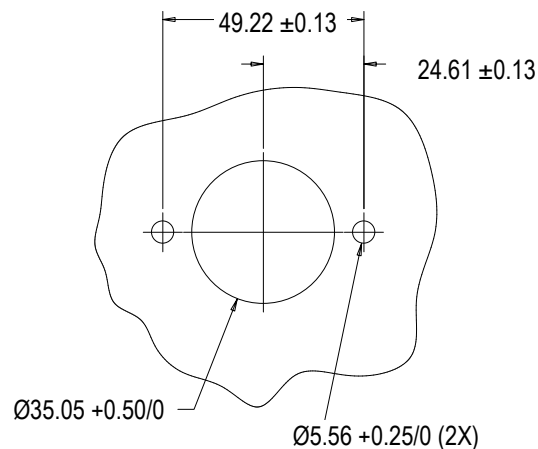


Figure 5

B. Receptacle Orientation

1. Tool-less Mounted Option

Locate the receptacle where artificial light cannot fall on the mating photocell causing it to turn off or cycle (on and off) at night. To orient the receptacle so the North indicator points North, the receptacle must be rotated on the luminaire housing. By gripping on the upper portion of the receptacle housing, pull upward on the receptacle until it clears the two posts on the luminaire housing. The receptacle may then be rotated either clockwise or counterclockwise to attain the desired orientation. If resistance occurs during rotation, then the 360° stop feature was most likely engaged. Rotate the receptacle in the opposite direction until the desired orientation is attained. After rotation, ensure the both the receptacle and luminaire housing are fully seated against gasket to maintain a water-tight seal. Reference Figure 6

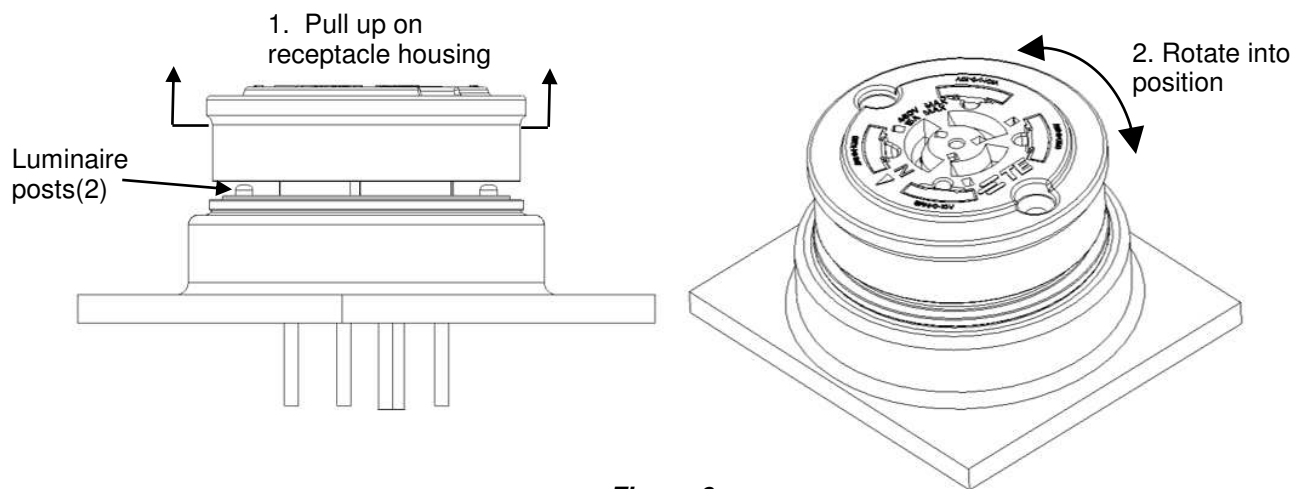


Figure 6

2. Hardware Mounted Option

Locate the receptacle where artificial light cannot fall on the mating photocell causing it to turn off or cycle (on and off) at night. To orient the receptacle so the North indicator points North, mounting holes in the luminaire must be positioned such that the preferred orientation is attained.

C. Workmanship

The housing must not be damaged in any way. There shall be no nicked wire insulation.

3.7. Wire Connections and Diagram

A. Wire Connections

The receptacle wires must be appropriately spliced with the correct line voltage power or dimming signal source. When splicing lead wires with crimp-style splices, wire nuts, etc., ensure the proper size splicing connector per the manufacturer's recommendation is being used.



DANGER

Extreme caution must be taken to ensure that power is OFF prior to disconnecting or connecting any wires to prevent electrical shock.

i **NOTE**
All wire connections must be electrically insulated.

B. Wiring Diagram

The receptacle wires must be appropriately spliced with the correct line voltage power or dimming signal source. Refer to the wiring diagram example shown in Figure 7. Wiring diagram shown is for general information only. Luminaire manufacturer must determine wiring diagram based upon their ballast/driver with dimming control components.

Wiring Diagram
 (For General Information Only)

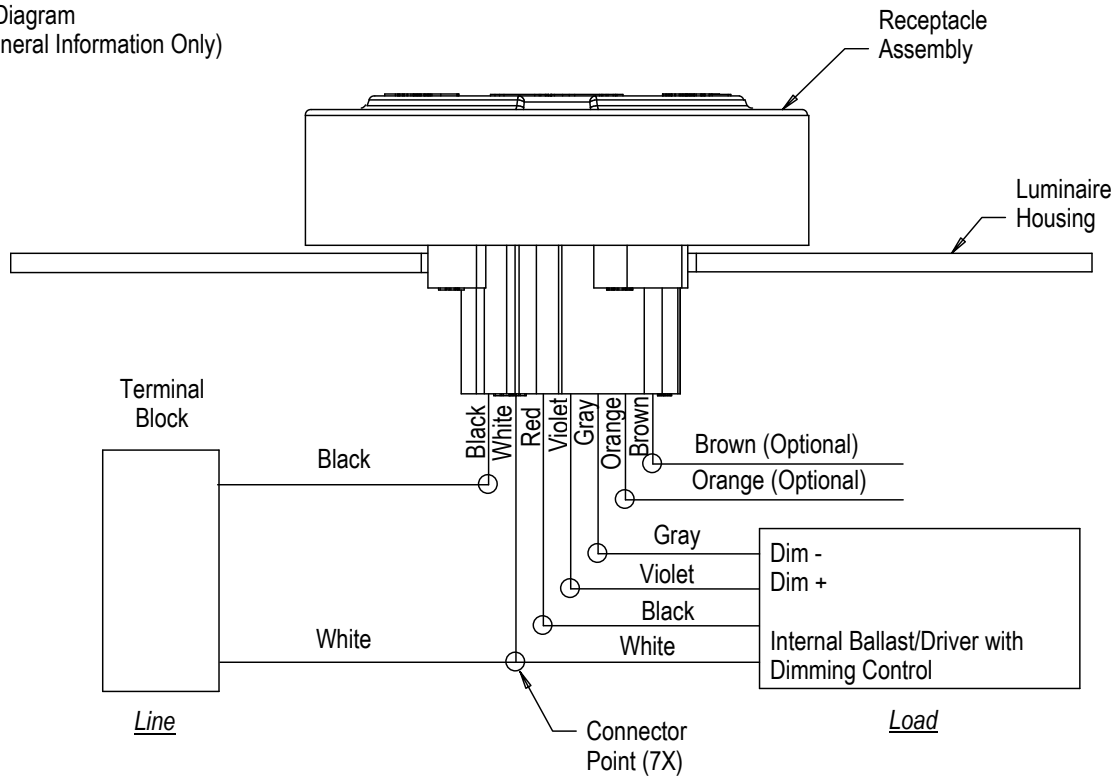


Figure 7

Luminaire is a trademark.

3.8. Strain Relief

It is recommended that a means be provided to support the wire bundle extending away from the receptacle assembly to prevent inadvertent application of high force to the wire bundle from transmitting into the wire/connector interface. The suggested strain relief method is to use a cable tie and anchor mounted inside the luminaire.

3.9. Mating and Un-Mating Photocell to Receptacle

Align photocell blades with receptacle power contact circuits. Note that the neutral photocell blade is larger than the line and load blades, providing mating polarization. After properly aligning the blades to the receptacle power contact circuits, push downward until the photocell is bottomed on the receptacle's mating surface, slightly compressing gasket of the photocell. Then complete mating by twisting the photocell in a clockwise direction. The photocell will lock into position. To un-mate, twist the photocell counter-clockwise and pull upward to release it from the receptacle. After mating, ensure the both the receptacle and luminaire housing remain fully seated against the receptacle gasket to maintain a water-tight seal. Reference Figure 8.

1. Push Downward
 2. Twist Clockwise to Lock/Mate
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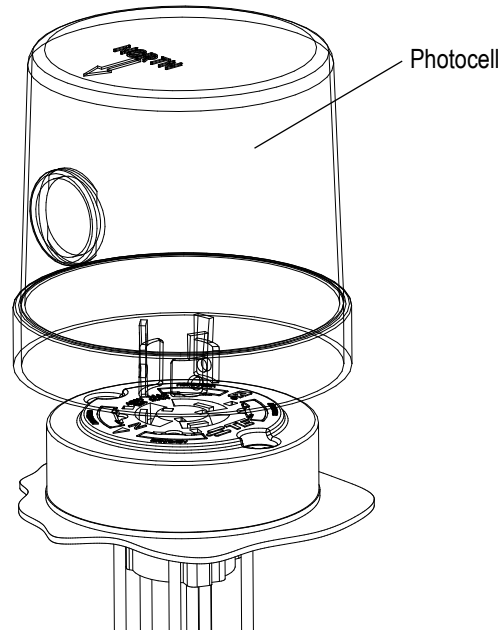


Figure 8

3.10. Replacement and Repair

The contacts, housing, retention spring plate and retaining ring are not repairable. DO NOT use an assembly with damaged or defective components. If damaged, replace the receptacle assembly with a new one.

4. QUALIFICATIONS

The LUMAWISE Endurance N Tool-less Dimming Receptacles are Component Recognized by Underwriters Laboratories, Inc. in File E66375, Volume 6, and have been investigated to CSA International by UL.

5. TOOLING

No special tooling is required for the installation of this product line.

6. VISUAL AID

6.1 Tool-Less Mounting Option

Figure 9 below shows a typical application of a LUMAWISE Endurance N tool-less rotatable receptacle mounted with no special tools required (no mounting hardware). This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

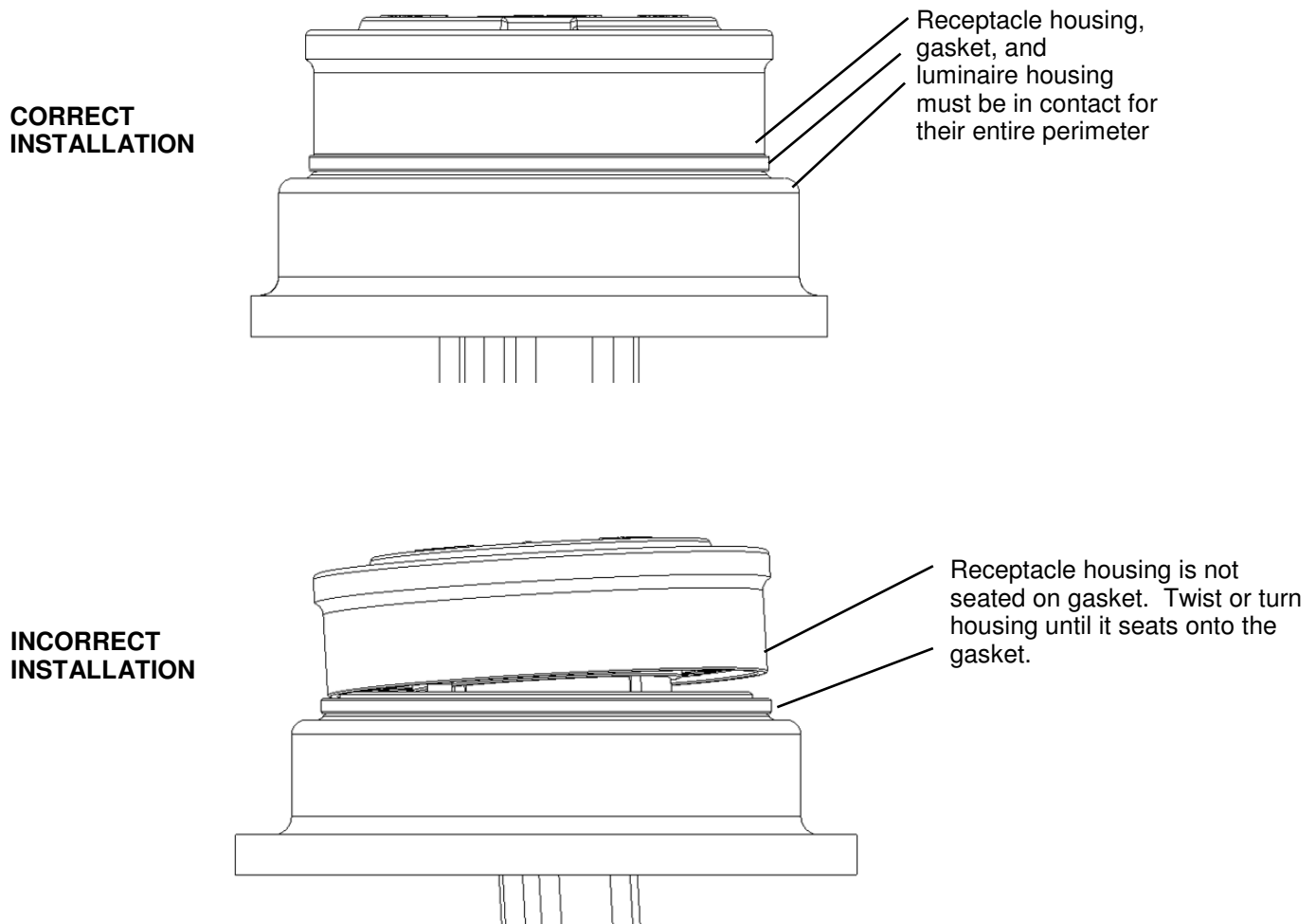


Figure 9

6.2 Hardware Mounting Option and General Visual Aids

Figure 10 below shows a typical application of a LUMAWISE Endurance N tool-less rotatable receptacle mounted with mounting screws. This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

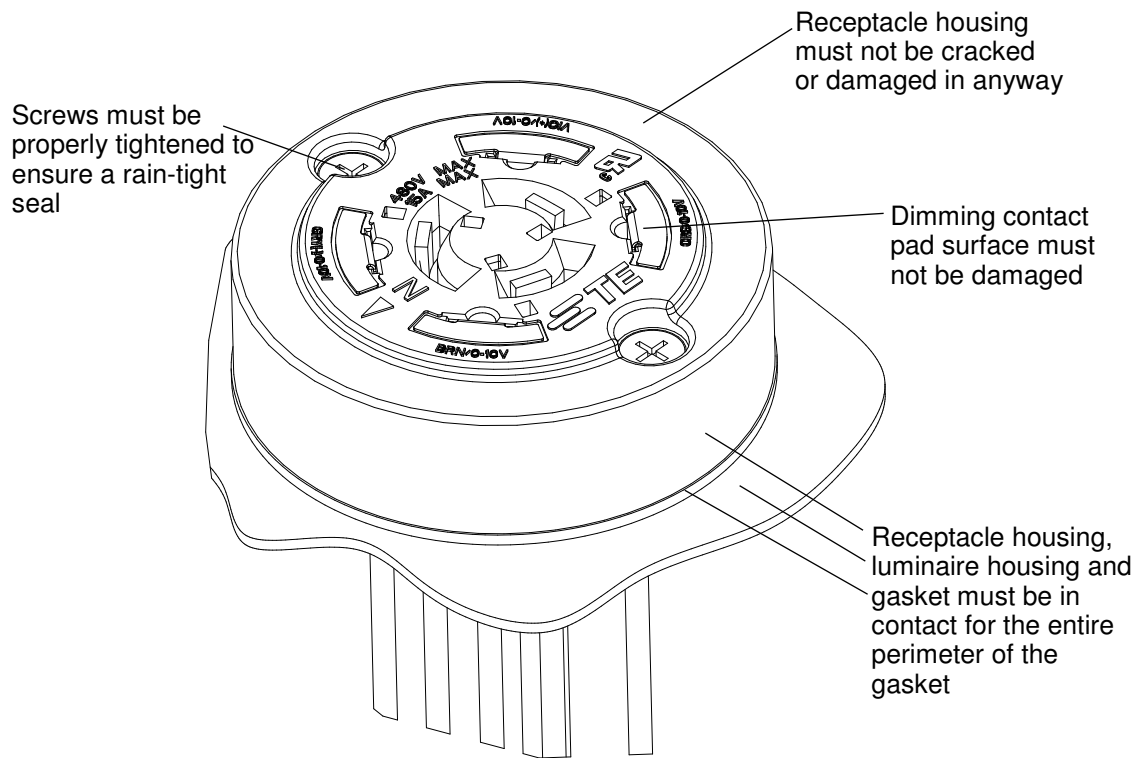


Figure 10