

LUMAWISE STREET LIGHT DIMMING AND CONTROL

QUICK REFERENCE GUIDE

LUMAWISE STREET LIGHT DIMMING AND CONTROL

LUMAWISE Endurance products from TE Connectivity provide reliable protection for the controls used in street and outdoor lighting. Endurance N products are NEMA/ANSI compliant. A receptacle connector is integrated into the light fixture and receives a base which is the foundation of the lighting control. In addition to offering this sealed interconnect solution between luminaire and control module the Endurance N product series also offers UV resistant high impact rated covers to fully seal and protect the lighting control. Endurance S products are used in sensor ready street lighting applications which are low voltage and DALI controlled. The newer and expanding Endurance S portfolio of products is compliant to Zhaga Book 18.

Features:

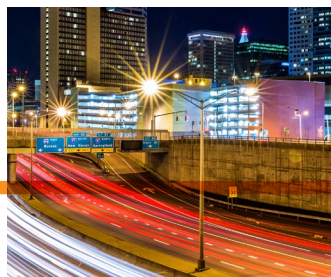
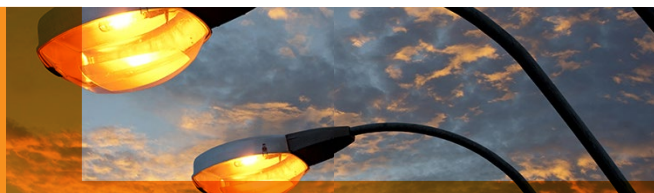
- ANSI C136 compliant
- Zhaga Book 18 compliant
- IP65 and IP66 sealing (CB Certified)
- IK09 high impact resistant
- UL UV-f1 rated plastic materials for outdoor use

Advantages and Benefits:

- Follows industry standards
- Enables energy management through dimming functionality
- Provides secure low torque mating of base and receptacle
- Extends life in harsh outdoor environments with UV resistant materials and effective sealing

Applications:

- Outdoor LED Lighting
- Highway Lighting
- Parking Lot Lighting
- Public Areas Lighting
- Railway Stations Lighting
- Roadway Lighting
- Street & Area Lighting
- Tram Lines Lighting
- Lighting Controls



ANSI ZHAGA

C136

Book 18

“TE is a leader in enabling lighting OEMs to bring LED lighting and control to a new level addressing the evolving needs in our communities, cities, streets and highways for safety, energy management and connectivity.”

– Scott Hamilton, Global Product Manager

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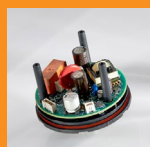
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ZHAGA BOOK 18 STREET LIGHT CONNECTORS:

REDUCE THE COMPLEXITY OF STREET LIGHTING ARCHITECTURE

LUMAWISE Endurance S Connector System is an ecosystem of products designed for sensor and other control system applications. The original Endurance S Zhaga Book 18 street light connectors enable DALI controlled Book 18 compliant luminaires for street and area lighting. The Endurance S ecosystem has been expanded to enable additional use cases. Endurance S Sensor Ready components offer all the original Endurance S benefits with expanded electrical ratings plus alternate key combinations for protected mating.

The Endurance S ecosystem of products includes a receptacle connector as well as several base and dome combinations to house sense and control modules from the surrounding harsh environment. The IP66 rated receptacle assembly, base and dome combinations provide a sealed electrical interface and robust packaging solution. The compact design is UV resistant, appealing to the eye and can be mounted facing upward, downwards or sideways. Having keyed mating combinations brings flexibility and differentiation to the designer.



LUMAWISE ENDURANCE S CONNECTORS HAVE BEEN DESIGNED AS A STAND-ALONE SYSTEM AND CAN BE USED IN A COMPLEMENTARY FUNCTION AS AN AUXILIARY SENSOR MODULE WHEN ADDITIONAL FUNCTIONALITY IS REQUIRED IN ANSI/NEMA BASED LIGHTING FIXTURES. INSTALLATION IS EASY AND FAST. PUSH-AND-TWIST WITH ONE HAND LOCKING DOES NOT REQUIRE ANY SPECIAL TOOLS.

ZHAGA BOOK 18 CONNECTOR SYSTEM

FEATURES:

- Compact size allowing greater flexibility in luminaire design
- IP66 sealing with no mounting screws
- Simple insert and rotate to lock feature, no tooling needed and one handed operation to install allows luminaires to be simply and quickly upgraded
- High impact protection - IK09 rating
- Flexible mounting position. Top mounted, side mounted and bottom mounted facing
- Scalable solution allows use of Ø40mm and a Ø80mm controls with the same connection interface
- Poke-in contact design reduces logistics issues with needing different wire lengths for different luminaires
- CB certification

APPLICATIONS:

- Street and Area Lighting
- Roadway Lighting
- Commercial/Municipal Outdoor Lighting
- Outdoor Luminaires
 - Wall Packs
 - Parking Lots
 - Walkways Photo Controls
- City Management System
- Sensor modules i.e. motion

ELECTRICAL:

- Contact rating: 5A, 250V
- Meets 10kV dielectric withstand voltage to mounting surface 4 pole contacts

MECHANICAL:

- Mounting: M20X1.5 thread
- Height above luminaire: 10mm
- IP65 & IP66
- Receptacle: Ø30mm
- Gasket: Ø36.5mm
- Thread length: 18.5mm
- IK09 rated system solution

MATERIALS:

- PBT receptacle
- LSR gasket
- Polycarbonate domes
- UL UV-f1 rated for outdoor use

SPECIFICATIONS:

- Product: **108-133073**
- Application: **114-133074**
- Rated IEC61984 and UL773
- CB Certified

ZHAGA BOOK 18 CONNECTOR SYSTEM

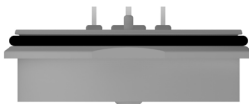
Product Selection Information

		Part Number	Description	Color	Height
RECEPTACLE - SEALING CAP		2213858-1	Receptacle (includes sealing ring, washer and nut)	-	-
		2213795-1 2213795-2	Sealing Cap	Dark Gray Light Gray	-

		Part Number	Description	Color	Height
40mm BASE - DOMES		2213837-1	Base	-	-
		2329013-1	Dome	Smoke Gray	Low (24.25mm)
		1-2329013-1	Dome	Clear	Low (24.25mm)
		2329013-2	Dome	Smoke Gray	Tall (39.25mm)
		1-2329013-2	Dome	Clear	Tall (39.25mm)



2329013-2
LUMAWISE Endurance S Dome
Smoke Gray - Tall - 40mm

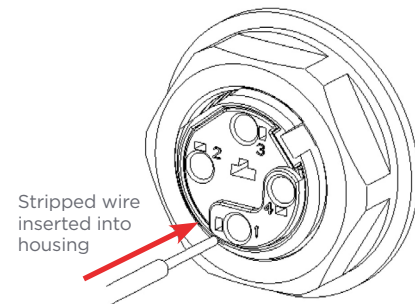


2213837-1
LUMAWISE Endurance S Base
40mm



2213858-1
LUMAWISE Endurance S
Receptacle

Receptacle



Stripped wire
inserted into
housing

Wire poke-in locations (4)

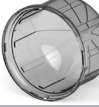
Pin #	Function
1	+24V power supply
2	Negative pole for Dali or Dali based protocol & shared ground return for 24V power supply
3	Positive pole for Dali or Dali based protocol
4	General digital I/O (greater than 7V)

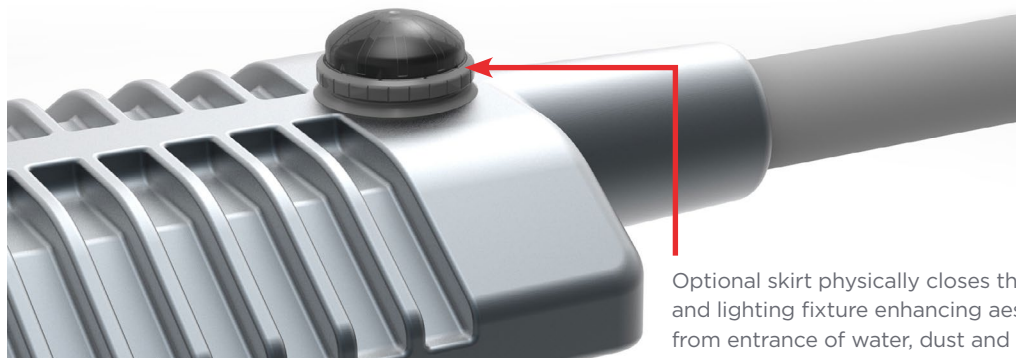
LUMAWISE Endurance S products represented
on this page are not shown actual size.

Colored wire insertion markings and additional keying
solutions are also available, contact [Product and
Customer Support](#).

ZHAGA BOOK 18 CONNECTOR SYSTEM

Product Selection Information

	Part Number	Description	Color	Height
80mm BASES - DOMES	 2213831-3	Base	-	-
	 2213831-2	Base with Vent	-	-
	 2328823-1	Dome	Smoke Gray	Low (33.43mm)
	 1-2328823-1	Dome	Clear	Low (33.43mm)
	 2328823-2	Dome	Smoke Gray	Medium (43.43mm)
	 1-2328823-2	Dome	Clear	Medium (43.43mm)
	 2328823-3	Dome	Smoke Gray	Tall (58.43mm)
	 1-2328823-3	Dome	Clear	Tall (58.43mm)
OPTIONAL ACCESSORIES	 1-2337216-1	Skirt	Black	-
	 1-2337216-2	Skirt	Light Gray	-
	 1-2337216-3	Skirt	Dark Gray	-



Optional skirt physically closes the gap between control module and lighting fixture enhancing aesthetics and further protecting from entrance of water, dust and insects.

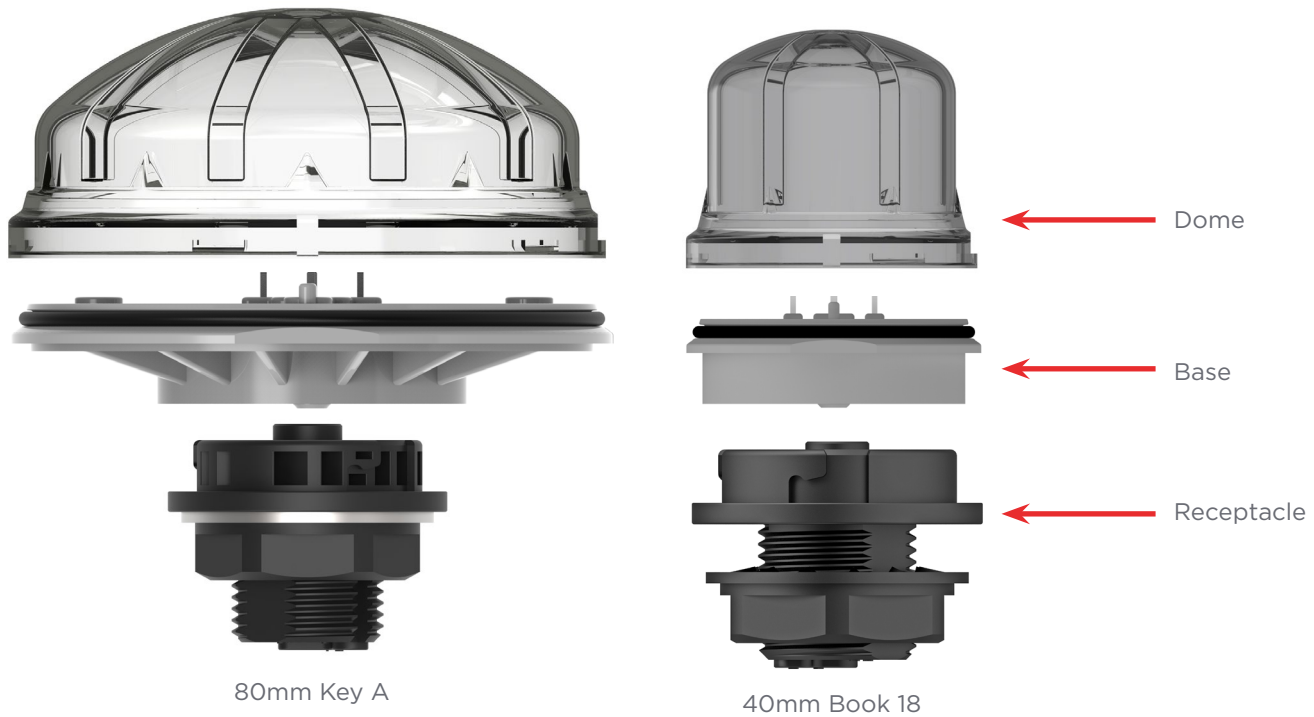
KEYED CONNECTOR SYSTEM

Product Selection Information

		Part Number	Description	Color	Key
RECEPTACLE - SEALING CAP		2343403-1	Receptacle (includes sealing ring, washer and nut)	Black	A
		2341474-1	Sealing Cap	Dark Gray	A
		Part Number	Description	Key	
40mm/80mm BASES		2343405-1	40mm Base	A	
		2-2343404-1	80mm Base	A	
		1-2343404-1	80mm Base with vent	A	
		Part Number	Description	Color	Height
40mm DOMES		1-2329013-1	40mm Dome	Clear	Low (24.25mm)
		1-2329013-2	40mm Dome	Clear	Tall (39.25mm)
80mm DOMES		1-2328823-1	80mm Dome	Clear	Low (33.43mm)
		1-2328823-2	80mm Dome	Clear	Medium (43.43mm)
		1-2328823-3	80mm Dome	Clear	Tall (58.43 mm)

Additional dome colors also available, refer to previous pages for more information.

CONNECTOR SYSTEM

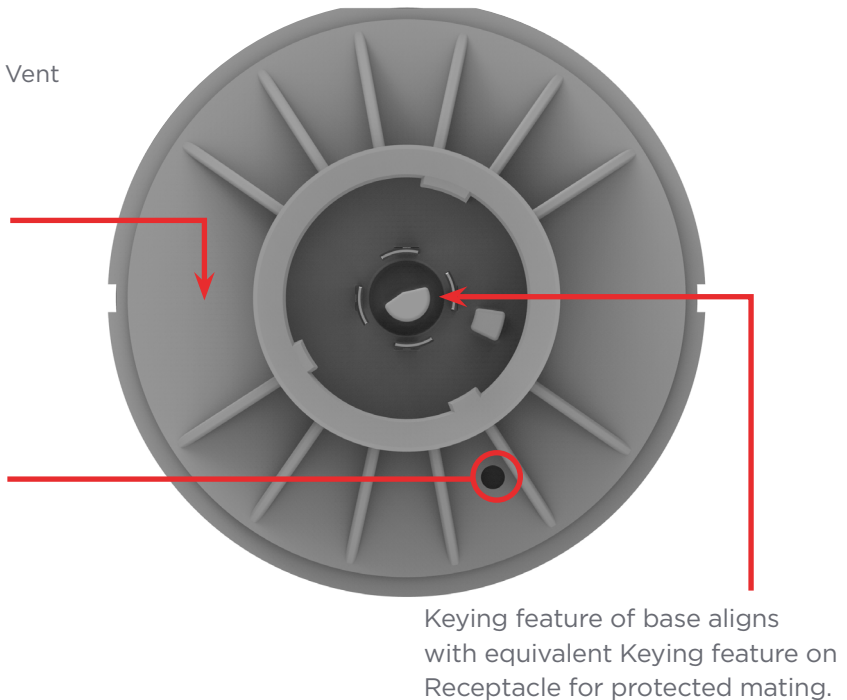


1-2343404-1

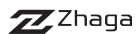
LUMAWISE Endurance S Base with Vent
Key A 80mm

Flat surface for label placement.

An optional vent in the 80mm base assembly enables pressure optimization inside the sealed control module. The vent also helps to minimize condensation through vapor diffusion.



LUMAWISE Endurance S products represented on this page are shown actual size.

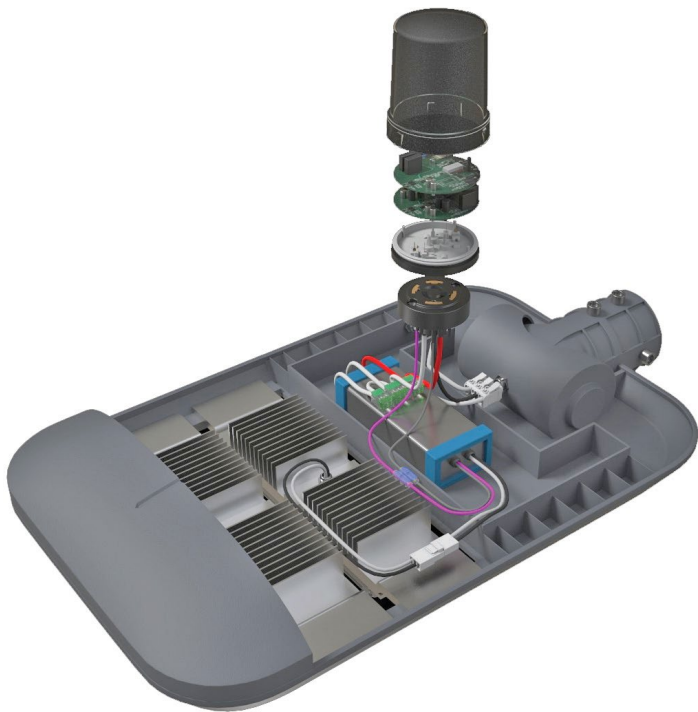


TE Connectivity is a participating member of the Zhaga Consortium, an industry-wide cooperation enabling the interchangeability of LED light sources and simplifying LED applications for general lighting.

LUMAWISE Endurance N

NEMA/ANSI STREET LIGHT CONNECTORS:

NEMA/ANSI C136 compliant LUMAWISE Endurance N connectors provide an electrical and mechanical interconnection between an ANSI C136 compliant control and luminaire. Ideal for outdoor commercial and utility lighting the ANSI C136.41 compliant dimming receptacle is available with two or four dimming contacts to support either 0-10 VDC dimming methods or Digital Addressable Lighting Interface (DALI), while providing a reliable power interconnect with three robust twist lock contacts. Lumawise Endurance N control connectors include base assemblies and covers which when combined provide a sealed, IP66 rated control enclosure. The Endurance N product family also includes caps and a power management sub-assembly.



“TE CONNECTIVITY’S LUMAWISE ENDURANCE N INTERCONNECTS PROVIDE AN ANSI C136 COMPLIANT ELECTRICAL AND MECHANICAL INTERFACE CONNECTION FOR ROADWAY, STREET AND AREA LED LUMINAIRES AND CONTROLS. OUR IOT READY ECOSYSTEM, EMBEDDED WITH ELECTRONICS, SOFTWARE, SENSORS AND CONNECTIVITY ENABLES LUMINAIRES TO SERVE AS A LIGHTING SOURCE AND A COMMUNICATION DEVICE THAT COLLECTS AND EXCHANGES DATA.” ALEX HUNT III

FEATURES:

- ANSI Compliant
- Sealed interconnect solution
- Available with two or four dimming contacts to support one or two channel dimming protocols.
- Robust twist lock contacts for a reliable power interconnect.

APPLICATIONS:

- Street and Area Lighting
- Roadway Lighting
- Commercial Outdoor Lighting
(i.e. parking lots, car dealerships)
- Photo Controls

LUMAWISE Endurance N

ANSI C136.10 RECEPTACLE ASSEMBLY

ELECTRICAL:

- Power contacts: Current rating: 15 A max
Voltage rating: 480 VAC/DC
- cUR recognized to UL 773

MECHANICAL:

- Conforms to dimensional requirements of ANSI C136.10
- Power contacts terminated to 14AWG stranded wire per UL1015 or UL3321

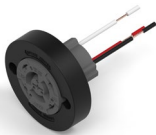
MATERIALS:

- Power contacts: Copper Alloy, tin over nickel plating
- Housing: Glass filled PBT, UL 94V-0 flammability rated

SPECIFICATIONS:

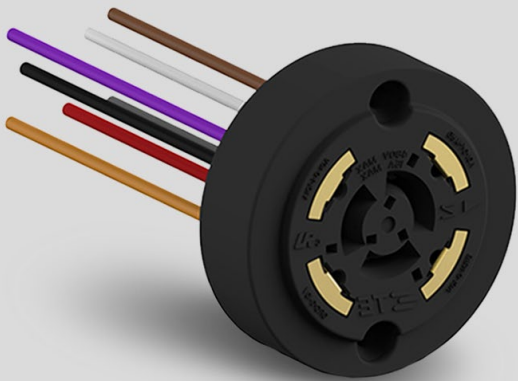
- Product: [108-32059](#)
- Application: [114-32115/114-32148](#)

Product Selection Information

	Part Number	Description	Position	Wire	Required Sealing Gasket
	6-2213362-2	Standard Receptacle Assembly	3	150 °C	2213469-1
	6-2213362-1			105 °C	
	2213848-1	Rotatable Receptacle Assembly	3	150 °C	2213626-1
	2213848-2			105 °C	

ANSI C136.41 STANDARD DIMMING RECEPTACLE ASSEMBLY

Ideal for outdoor commercial and utility lighting the ANSI C136.41 compliant dimming receptacle is available with two or four dimming contacts to support either 0-10 VDC dimming methods or Digital Addressable Lighting Interface (DALI), while providing a reliable power interconnect with three robust twist lock contacts.



ANSI C136.41 COMPLIANT DIMMING RECEPTACLE PROVIDES AN ELECTRICAL AND MECHANICAL INTERCONNECTION BETWEEN AN ANSI C136.41-2013 COMPLIANT CONTROL AND LUMINAIRE.

FEATURES:

- Accepts ANSI standard dimmable photocells to provide a connection between the photocell and the luminaire
- Available with two or four dimming contacts to support one or two channel dimming protocols
- Robust twist lock contacts for a reliable power interconnect
- Receptacle comes pre-terminated with wire leads for ease of integration into new or existing light fixtures
- Available with 105° and 150° C rated wire insulation for varying temperature rated luminaires
- Provides IP66 rating to the luminaire when mated with Endurance N control bases.

APPLICATIONS:

- Street and Area Lighting
- Roadway Lighting
- Commercial Outdoor Lighting (i.e. parking lots, car dealerships)
- Photo Controls

ANSI C136.41 STANDARD DIMMING RECEPTACLE ASSEMBLY**ELECTRICAL:**

- Power contacts Current rating: 12 A max
Voltage rating: 480 VAC/DC
- Dimming contacts Current rating: 1.5 A max
Voltage rating: 30 VAC/DC
- cUR recognized to UL 773

MECHANICAL:

- Conforms to dimensional requirements of ANSI C136.41-2013
- Offer a 5 and 7 position version
 - 5 position: 3 power contacts + 2 dimming/signal contacts
 - 7 position: 3 power contacts + 4 dimming/signal contacts
- Power contacts terminated to 14AWG stranded wire per UL1015 or UL3321
- Signal Contacts terminated to 18AWG stranded wire per UL1015 or UL3321

MATERIALS:

- Power contacts: Copper Alloy, tin over nickel plating
- Dimming contacts: Copper Alloy, gold over nickel plating
- Housing: Glass filled PBT, UL 94V-0 flammability rated

SPECIFICATIONS:

- Product: **108-32059**
- Application: **114-32115**

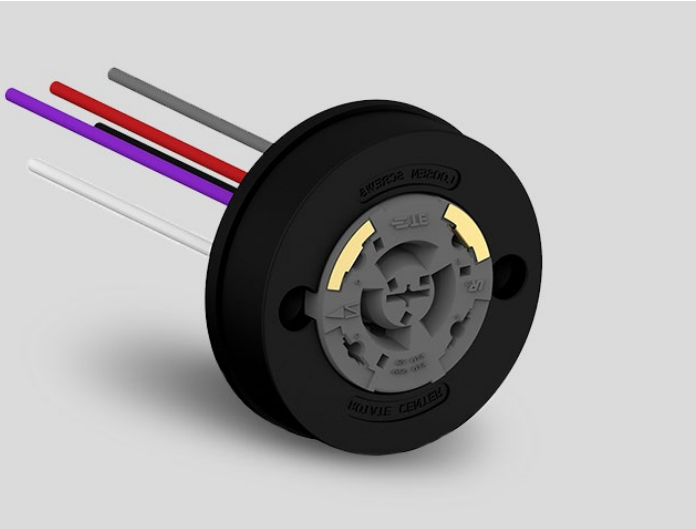
Product Selection Information

	Part Number	Description	Position	Wire Size
	2213362-1	Standard Dimming Receptacle Assembly	5	150 °C
	2213362-3			105 °C
	2213362-2	Standard Dimming Receptacle Assembly	7	150 °C
	2213362-4			105 °C
	2213469-1	Sealing Gasket	-	-

Products available as ICE 61984 Class II Compliant - Double Insulation,
Contact [Product and Customer Support](#).

ANSI C136.41 ROTATABLE DIMMING RECEPTACLE ASSEMBLY

Provides a rotatable electrical and mechanical interconnection between an ANSI C136.41-2013 photo control cell and luminaire. Ideal for outdoor commercial and utility lighting the ANSI C136.41 compliant dimming receptacle is available with two or four dimming contacts to support either 0-10 VDC dimming methods or Digital Addressable Lighting Interface (DALI), while providing a reliable power interconnect with three robust twist lock contacts.



LUMAWISE ROTATABLE DIMMING RECEPTACLE IS A TWO-PIECE ASSEMBLY WHICH ALLOWS ROTATION UP TO 355 DEGREES. THE ABILITY TO FULLY ROTATE THE DIMMING RECEPTACLE FACILITATES INSTALLATION AS IT ALLOWS THE PHOTO NODE TO BE POINTED DUE NORTH IN ANY TYPE OF STREET, AREA OR ROADWAY LIGHTING APPLICATION.

FEATURES:

- Fully rotates up to 355 degrees
- Accepts ANSI standard dimmable photocells to provide a connection between the photocell and the luminaire
- Available with two or four dimming contacts to support one or two channel dimming protocols
- Robust twist lock contacts for a reliable power interconnect
- Receptacle comes pre-terminated with wire leads for ease of integration into new or existing light fixtures
- Available with 105° and 150° C rated wire insulation for varying temperature rated luminaires
- Provides IP66 rating to the luminaire when mated with Endurance N control bases.

APPLICATIONS:

- Street and Area Lighting
- Roadway Lighting
- Commercial Outdoor Lighting
(i.e. parking lots, car dealerships)
- Photo Controls

ANSI C136.41 ROTATABLE DIMMING RECEPTACLE ASSEMBLY

ELECTRICAL:

- Power contacts: Current rating: 15 A max
Voltage rating: 480 VAC/DC
- Dimming contacts: Current rating: 1.5 A max
Voltage rating: 30 VAC/DC
- cUR recognized to UL 773

MECHANICAL:

- Conforms to dimensional requirements of ANSI C136.41-2013
- Offer a 5 and 7 position version
- 5 position: 3 power contacts +
2 dimming/signal contacts
- 7 position: 3 power contacts +
4 dimming/signal contacts
- Power contacts terminated to 14AWG stranded wire per UL1015 or UL3321
- Signal Contacts terminated to 18AWG stranded wire per UL1015

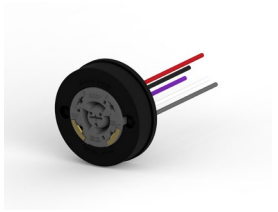
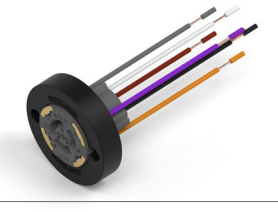
MATERIALS:

- Power contacts: Copper Alloy, tin over nickel plating
- Dimming contacts: Copper Alloy, gold over nickel plating
- Housing: Glass filled PBT, UL 94V-0 flammability rated

SPECIFICATIONS:

- Product: **108-32059**
- Application: **114-32148**
- Instruction sheet: **408-32196**

Product Selection Information

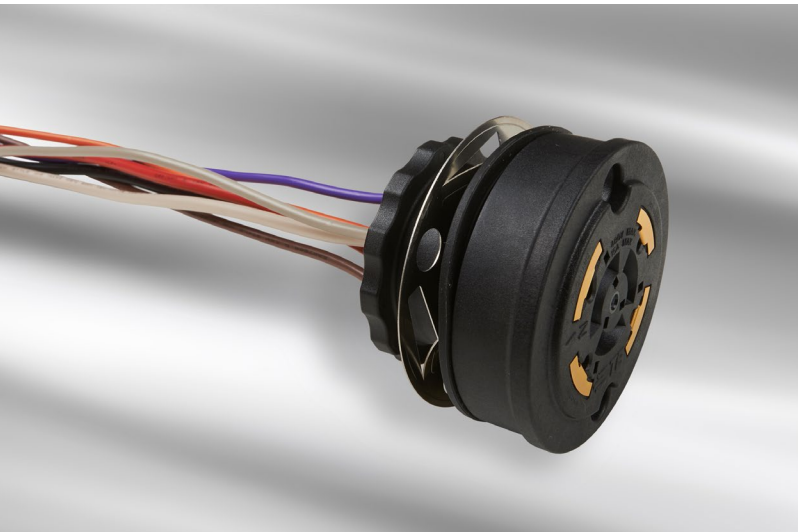
	Part Number	Description	Position	Wire
	2213627-1	Rotatable Dimming Receptacle Assembly	5	150 °C
	2213627-3	Rotatable Dimming Receptacle Assembly		105 °C
	2213627-2	Rotatable Dimming Receptacle Assembly	7	150 °C
	2213627-4	Rotatable Dimming Receptacle Assembly		105 °C
	2213626-1	Sealing Gasket	-	-

“TE CONNECTIVITY’S ROTATABLE DIMMING RECEPTACLES HAVE BEEN ACCEPTED IN THE INDUSTRY AS A “TOOL-LESS” DESIGN REQUIRING ONLY A FLAT-BLADE SCREWDRIVER TO LOOSEN AND TIGHTEN FOR ROTATION.” ALEX HUNT III – AMERICAS PRODUCT MANAGER

LUMAWISE Endurance N

ANSI C136.41 TOOL-LESS ROTATABLE DIMMING RECEPTACLE ASSEMBLY

LUMAWISE Endurance N tool-less rotatable dimming receptacle assembly is ANSI C136.41 compliant and hand rotatable up to 355° degrees for outdoor luminaires that require a NEMA based socket. Roadway and street and area lighting applications require an interface between lighting controls and a light fixture that is easily assembled into the light, sealed from harsh outdoor elements and designed for ease of rotation.



THE ANSI C136.41 COMPLIANT ROTATABLE “TOOL-LESS” DIMMING RECEPTACLE ASSEMBLY IS ROTATED IN THE FIELD BY HAND WITH A SIMPLE LIFT AND TWIST PROCESS.

FEATURES:

- Allows installers to optimize positioning of the photo control with 355° degree rotation at 15° increments
- Prevents wire tangling and/or stress inside the lighting fixture
- Hand assembly to the lighting fixture during manufacturing makes for ease of assembly without tools
- Simplifies rotation and reduces installation time required to position the photo control
- Provides IP55 rating to the luminaire when mated with Endurance N control bases
- Standard NEMA socket interface accepts a wide range of controls

APPLICATIONS:

- Street and Area Lighting
- Roadway Lighting
- Commercial Outdoor Lighting (i.e. parking lots, car dealerships)
- Photo Controls

ANSI C136.41 TOOL-LESS ROTATABLE DIMMING RECEPTACLE ASSEMBLY

ELECTRICAL:

- Power Contacts: 15A Max, 480 VAC max
- Signal Contacts: 1.5A Max, 30 VDC

MECHANICAL:

- 12 lbs pull force to lift and rotate connector
- Conforms to dimensional requirements of ANSI C136.41-2013
- Offer a 5 and 7 position version
 - 5 position: 3 power contacts + 2 dimming/signal contacts
 - 7 position: 3 power contacts + 4 dimming/signal contacts
- Power contacts terminated to 14AWG stranded wire per UL1015 or UL3321
- Signal Contacts terminated to 18AWG stranded wire per UL1015 or UL3321

MATERIALS:

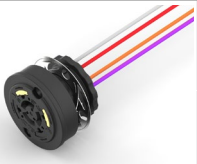
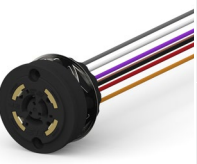
- Housings: PBT
- Spring Clip: Stainless steel
- Contact Terminals: Tin and select gold plated copper alloy
- Gasket: LSR Rubber

SPECIFICATIONS:

- Product: **108-133114**
- Application: **114-133114**
- UL773
- ANSI C13.41



Product Selection Information

	Part Number	Description	Position	Wire
	2-2332966-1	Tool-less Rotatable Receptacle Assembly	5	150°
	2-2332966-3			105°
	2-2332966-2	Tool-less Rotatable Receptacle Assembly	7	150°
	2-2332966-4			105°
	2332473-1	Sealing Gasket	-	-

NEMA/ANSI STREET LIGHT CONTROLS:

ENSURE PROTECTION FROM HARSH CONDITIONS

LUMAWISE Endurance N lighting control accessories include a NEMA/ANSI compliant base assembly in 76mm and 81mm diameter and cover providing an integrated solution that combines a power and signal interface between the lighting control and dimming receptacle. The assembly provides an IP66 rated control enclosure, helping to ensure protection from harsh conditions including rain, snow and salt spray.



THE BASE ASSEMBLY SOLUTION INCLUDES POWER TWIST LOCK TERMINALS, SPRING LEAF SIGNAL TERMINALS AND A SEPARATELY PACKAGED FOAM GASKET. WHEN COUPLED WITH THE 5-VA RATED COVER, THE FULLY ASSEMBLED PHOTO CONTROL ACHIEVES AN IP66 SEAL RATING.

FEATURES:

- ANSI C136.10/C136.41 Compliant
- Achieve long term reliability using TE's proven power and signal interface
- Translucent covers allow transmission of daylight to the light sensing device
- Achieve protection against dust and heavy jet spray with an IP66 rated solution
- Meets the flammability rating with a UL 94 5-VA rated cover
- Incorporating a vent into the base assembly enables full life expectancy of the electronics inside the enclosure

APPLICATIONS:

- Lighting Controls
- Street and Area Lighting
- Roadway Lighting
- Commercial Outdoor Lighting
(i.e. parking lots, car dealerships)

CONTROL BASE AND COVER

MECHANICAL:

- Operating Temperature Range: -40°C to +105° C
- Offer 3, 5 and 7 position version
 - 3 position: 3 power contacts
 - 5 position: 3 power contacts + 2 dimming/signal contacts
 - 7 position: 3 power contacts + 4 dimming/signal contacts

MATERIALS:

- Contact Plating: Tin plated power contacts
Gold plated signal contacts
- Housing Color: Base (black)
Cover (clear and transparent)
- Housing Material: Base (UL 94 V-0)
Cover (Polycarbonate)

SPECIFICATIONS:

- Product: **108-32125**
- Application: **114-32159**

Product Selection Information

76mm dia. Base and Cover

		Part Number	Description	Position
Bases		1-2213871-3	76mm Base Assembly	3
		1-2213871-1	76mm Base Assembly	5
		2213730-1	76mm Base Assembly	7
		1-2336396-1	76mm Base Assembly w/Vent	5
		2336396-1	76mm Base Assembly w/Vent	7
		2325661-1	76mm Shorting Base Assembly	7
		1-2325661-1	76mm Shorting Base Assembly w/ Vent	7

		Part Number	Description	Height	Color
Covers		2306128-1	Cover, Light Controller	50mm	Transparent Smoke Gray
		1-2306128-1	Cover, Light Controller	50mm	Clear
		2311664-1	Cover, Light Controller	75mm	Transparent Smoke Gray
		1-2311664-1	Cover, Light Controller	75mm	Clear
		2-2311664-1	Cover, Light Controller w/Flat Surface	75mm	Transparent Smoke Gray
		2213748-1	Cover, Light Controller	98mm	Transparent Smoke Gray
		1-2213748-1	Cover, Light Controller	98mm	Clear
		2306129-1	Cover, Light Controller	130mm	Transparent Smoke Gray
		1-2306129-1	Cover, Light Controller	130mm	Clear

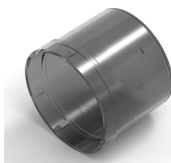
Additional cover colors also available, contact **Product and Customer Support**.

CONTROL BASE AND COVER

Product Selection Information

81mm dia. Base and Cover

		Part Number	Description	Position	
Bases		1-2213871-2	81mm Base Assembly	5	
		2213871-2	81mm Base Assembly	7	
		1-2336396-2	81mm Base Assembly w/Vent	5	
		2336396-2	81mm Base Assembly w/Vent	7	

		Part Number	Description	Height	Color
Covers		2315539-1	Cover, Light Controller	62mm	Transparent Smoke Gray
		1-2315539-1	Cover, Light Controller	62mm	Clear
		2338716-1	Cover, Light Controller	80mm	Transparent Smoke Gray
		1-2338716-1	Cover, Light Controller	80mm	Clear
		2306130-1	Cover, Light Controller	98mm	Transparent Smoke Gray
		1-2306130-1	Cover, Light Controller	98mm	Clear



1-2338716-1
LUMAWISE Endurance N Cover
Clear - 80mm - Tall

1-2311664-1
LUMAWISE Endurance N Cover
Clear - 75mm - Tall

1-2213871-2
LUMAWISE Endurance N Base
81mm diameter

1-2213871-1
LUMAWISE Endurance N Base
76mm diameter

Additional cover colors also available, contact
[Product and Customer Support](#).

C136.10 SHORTING AND OPEN CAPS

Offers an IP66 rating for outdoor harsh environments. LUMAWISE Endurance N caps are used to disconnect service (Open Cap) or to provide continual power from the pole to the luminaire (Shorting Cap). A shorting cap with an integrated Metal Oxide Varistor (MOV) provides surge protection for LED luminaires that are required to be on continuously.



PROVIDES A SAFE, CONVENIENT AND ECONOMICAL METHOD TO CLOSE OR OPEN THE PRIMARY CIRCUIT PATH ACROSS A NEMA COMPLIANT RECEPTACLE ON AN OUTDOOR LIGHT. THE LUMAWISE ENDURANCE N CAPS ARE ANSI C136.10 COMPLIANT AND UL LISTED.

FEATURES:

- Provides IP66 water ingress protection reducing outdoor light fixture maintenance and extending operating life
- Shorting cap with MOV protects the luminaire from transient line voltages
- An alternative to light sensing control units
- Distinct cap shape improves visual distinction between standard photo controls and shorting caps
- IK08 high impact resistant

APPLICATIONS:

- Street and Area Lighting
- Roadway Lighting
- Commercial Outdoor Lighting
(i.e. parking lots, car dealerships)

C136.10 SHORTING AND OPEN CAPS

ELECTRICAL:

- Current rating: 15 A max
- Voltage rating: 0 – 480 VAC

MECHANICAL:

- Operating Temperature Rating:
-40°to 120°C

MATERIALS:

- UV stabilized material

SPECIFICATIONS:

- Product: [108-133113](#)
- Instruction Sheet: [408-133113](#)
- ANSI C136.10
- UL773
- IEC 61984:200 8
- IEC 60529
- IEC 62262

CERTIFICATES:

- C-UL listed: E66375
- UL-EN certified: US-32907-UL

Product Selection Information

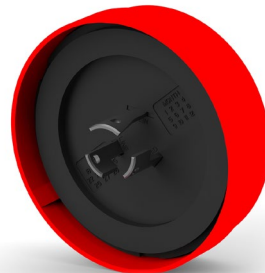
Description	Part Number
Shorting Cap Assembly	2328118-1
Shorting Cap Assembly w/Surge Protection	2328118-2
Open Cap Assembly	2328118-3



2328118-1



2328118-2

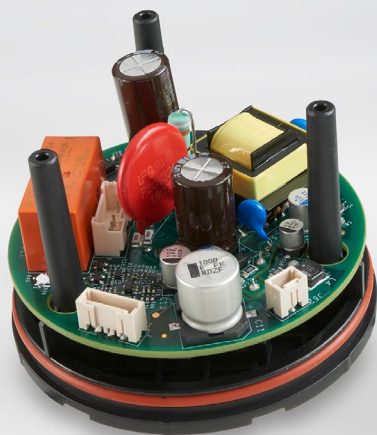


2328118-3

NEMA BASE AC/DC POWER MANAGEMENT:

JUMP START STREET LIGHTING CONTROL PROJECTS

LUMAWISE Endurance N enhanced base is a network lighting control (NLC) base assembly which provides AC power switching and DC power supplies necessary for complex network lighting control solutions, creating a platform to de-risk project schedules and cost of design changes of NEMA/ANSI street and outdoor network lighting control solutions.



LUMAWISE ENDURANCE N ENHANCED BASE DE-RISKS PROJECT SCHEDULES AND COST OF DESIGN CHANGES OF NEMA/ANSI STREET AND OUTDOOR NETWORK LIGHTING CONTROL. THE ENHANCED BASE TAKES OUR LIGHTING CONTROL BASE ASSEMBLY TO THE NEXT LEVEL OF PERFORMANCE BY PROVIDING AC POWER SWITCHING AND DC POWER SUPPLIES

FEATURES:

- Standard NEMA/ANSI Streetlight Interface
- Universal AC Input Range
- Isolated 24V DC Output for ballast control communications
- Isolated 5V and 3.3V DC outputs for customer circuits
- Low voltage signal interface to LED light fixture
- Integrated over current and surge protection
- Long life relay with zero-cross switching for AC load control
- Designed for compliance with UL 773, ANSI C136.41 and FCC Title 47 part 15

APPLICATIONS:

- Street and roadway lighting control
- Commercial, residential and campus outdoor lighting management
- Smart cities network lighting controls
- Smart grid to smart cities bridging

3

DC output voltages

ANSI

ANSI C136.41 compliance

UL

UL773 compliant

ENHANCED BASE

The enhanced base enables cost-effective design reuse through organized DC power and signaling interfaces. Using the enhanced base as a product platform de-risks project schedules and cost of design changes. This also lowers certifications and engineering costs at the same time as well as reducing supply chain expenses with new project opportunities, all to drive benefits to the bottom line.

SPECIFICATIONS:

- Application: **114-133085**
- Product: **108-133085**

MATERIALS:

- Housing: PBT
- Dimming contacts: Copper alloy gold plated
- Power contacts: Copper alloy tin plated
- Gasket: Vinyl-nitrile foam
- O-Ring: Silicone rubber
- RoHS compliant

ENVIRONMENTAL:

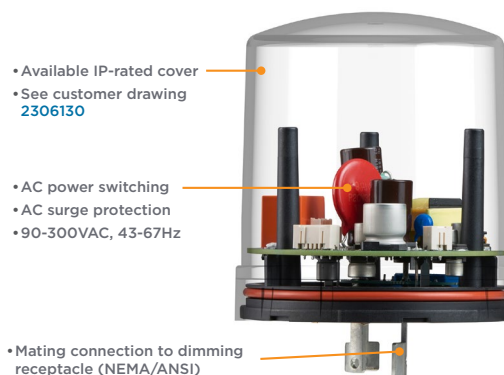
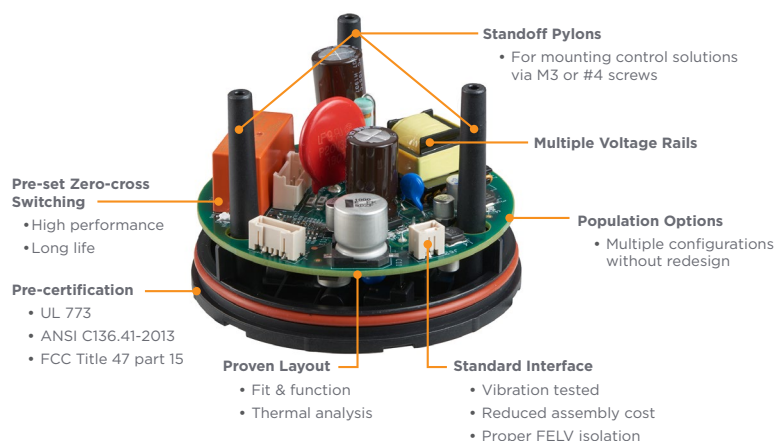
- Operating temperature: -40°C to +85°C
- Relative humidity:
 - Operating: 15% to 96%
 - Non-condensing environment
- Altitude
 - Operating: -15M to +2,000M
 - Non-Operating: -15M to +14,000M

ELECTRICAL:

Parameter	Value/Note
Input Voltage Range	90-300 VAC for 110/120, 230/240 and 277 VAC nominal sources
Input Frequency	47-63 Hz for 50/60 Hz nominal sources
Maximum AC current	5A based upon the relay ratings
DC Power Supplies	
Dimming	24 VDC at 50 mA maximum
Communications	5 VDC at 1000 mA maximum
Auxiliary	3.3 VDC at 500 mA maximum
Surge Protection	ANSI C62.41 6 kV, 3 kA combination wave surge protection
Power Consumption	<1W @ 120VAC, < 2W @ 277 VAC
Fail Mode*	On or Off

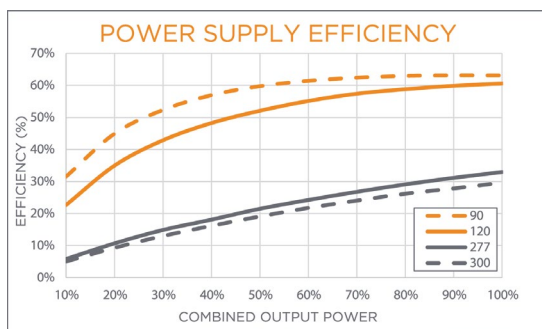
*value depends on part number

Product Features

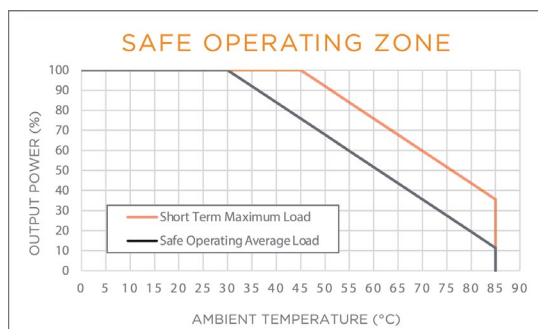


ENHANCED BASE

Efficiency



Temperature Derating



	Typical		
Output Specs	24V	5V	3.3V
Output Power	1.2 W	5 W	1.65 W
Line Regulation	<10%		<5%
Load Regulation - 120V, 30C, 10% to 100%	2.5%	5%	
Load Regulation - 277V, 30C, 10% to 100%	2.5%	5%	
Temp Regulation - 120V	1.5%		
Temp Regulation - 277V	1.5%		
Transient Response - 120V, 30C	<1.5 V	<0.5 V	
Transient Response - 277V, 30C	<1.5 V	<0.5 V	
Ripple - 120V, 30C	300 mv		
Ripple - 277V, 30C	300 mv		
Hold Up Time - 120V	20 ms		
Hold Up Time - 277V	250 ms		
Start Up Time	20 ms		

Input Specs	Typical
Source Voltage	90 to 300 VAC
Source Frequency	50hz for x-2314786-x 60hz for 2314786-x
Inrush Current - 120V	6 A
Inrush Current - 277V	13 A
Leakage Current	< 2 mA
Surge Protection	ANSI C62.41 6kV, 3 kA Combination Wave
Standby Power Consumption - 120V	0.7 W
Standby Power Consumption - 277V	1.0 W
Efficiency	60% (120V, 100% load)

EMC and Immunity

Conducted Emissions	FCC Title 47, Part 15, Class B
Radiated Emissions	FCC Title 47, Part 15, Class B
Harmonic Current	EN61000-3-2 Class A
Electrostatic Discharge (ESD)	JS-001, IEC 61000-4-2

Environmental

Storage Temperature	-40°C to +105°C
Operating Temperature	-40°C to +85°C (See 114-133085)
Relative Humidity	15% - 96%, Non-condensing
Altitude	-15M to 2000M

Switched Load

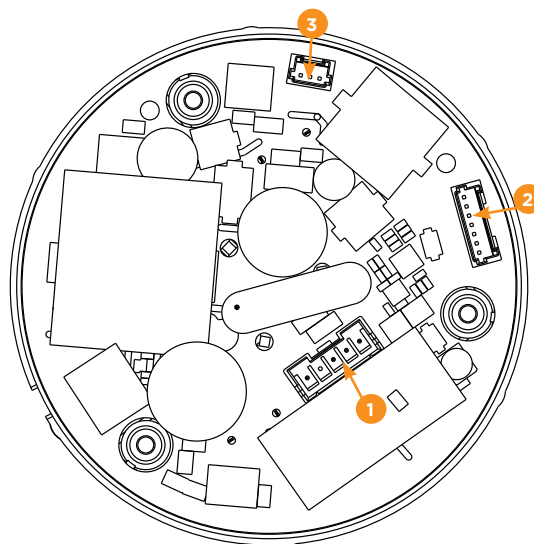
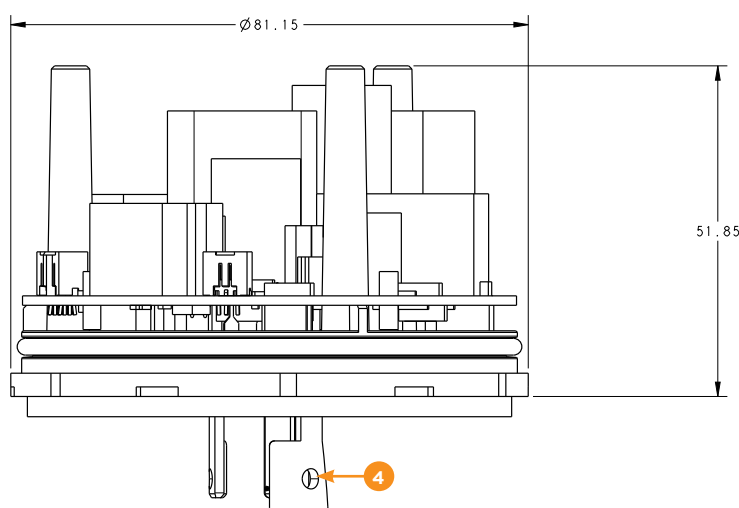
Max AC Current	8A Resistive 5A Electronic Ballast @ 120V 3A Electronic Ballast @ 277V
Endurance	C136.10 Long Life
Zero-Cross Switching	Yes (See 114-133085)

ENHANCED BASE

Product Selection Information

Part Number	Description	Frequency (Hz)	Fail Mode
2314786-1	LUMAWISE Endurance N Enhanced Base	60	ON
2314786-2	LUMAWISE Endurance N Enhanced Base	60	OFF
1-2314786-1	LUMAWISE Endurance N Enhanced Base	50	ON
1-2314786-2	LUMAWISE Endurance N Enhanced Base	50	OFF

Dimensions (mm)



Compatible Products

Item	Enhanced Base Interface	Description	Part Number
1	Energy Metering Connection	EMC Cable Assembly	2318044-1
2	Luminaire Control Connection	LCC Cable Assembly, 7 position	2318043-1
3	Management Power Connection	MPC Cable Assembly, 3 position	2318043-2
4	ANSI C136.41-2013 Interface	LUMAWISE Dimming Receptacle	2213362
			2213627

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