

Lighting

EVERY CONNECTION COUNTS



\$2.5B

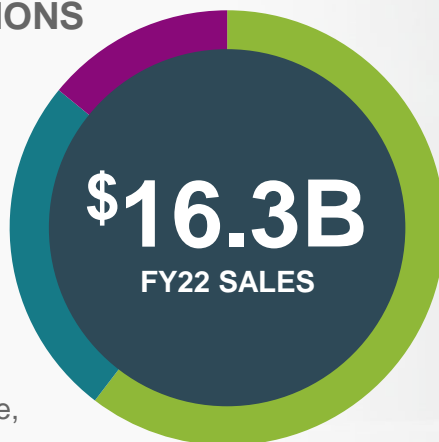
COMMUNICATIONS

Appliances, Data
& Devices

\$4.5B

INDUSTRIAL

Industrial, Aerospace,
Defense & Marine,
Medical, Energy



\$9.2B

TRANSPORTATION

Automotive, Industrial &
Commercial Transportation,
Sensors, Application Tooling

**CONNECT
LIKE THE WORLD
DEPENDS ON IT.
BECAUSE IT DOES.**

236B

PRODUCTS MANUFACTURED ANNUALLY

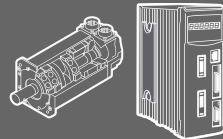
Sales figures have been rounded for presentation purposes



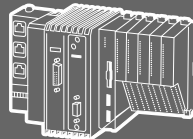
GLOBAL APPLICATION FOCUS



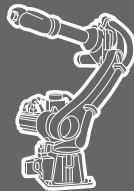
MOTION & DRIVES



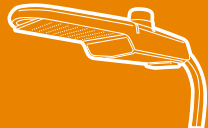
AUTOMATION CONTROLS



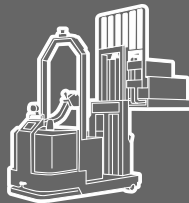
INDUSTRIAL ROBOTICS



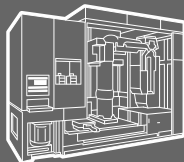
OUTDOOR LED LIGHTING



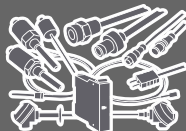
WAREHOUSE AUTOMATION



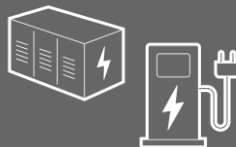
SEMICONDUCTOR MANUFACTURING EQUIPMENT



AUTOMATION SENSORS



BESS & EVI



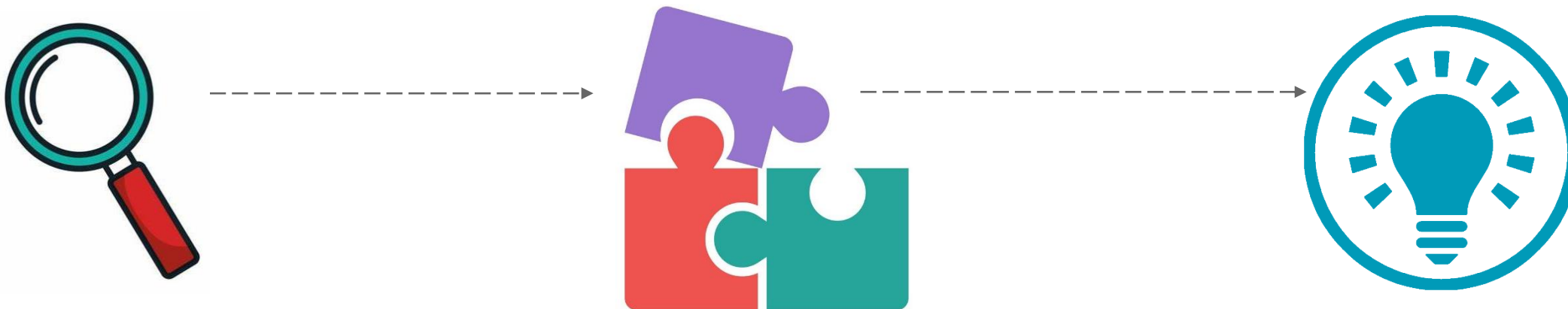
通过解决方案的视角告诉您

重点行业

是什么？

卖什么？

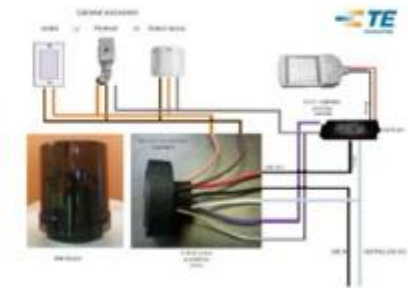
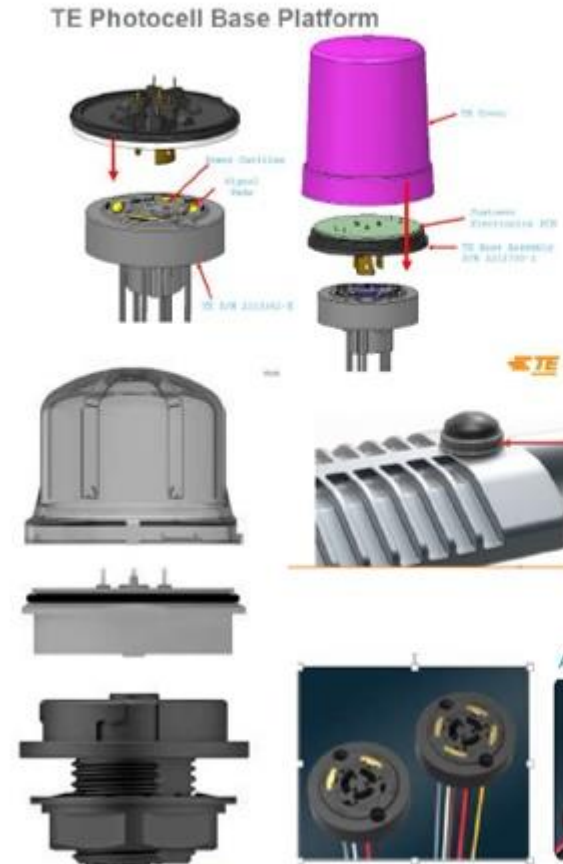
怎么卖？



Focus Applications

							
MOTION & DRIVES	AUTOMATION CONTROLS	INDUSTRIAL ROBOTICS	OUTDOOR LIGHTING	WAREHOUSE AUTOMATION	SEMICONDUCTOR MACHINERY	AUTOMATION SENSORS	BESS/ EVI
<ul style="list-style-type: none"> DC servo motors Servo drives AC drives 	<ul style="list-style-type: none"> PLC, SCADA Controllers I/O HMI IPc 	<ul style="list-style-type: none"> Articulated, SCARA & Cobots Controllers EOAT Service AMR 	<ul style="list-style-type: none"> Street, Area & Outdoor Photocells & Sensors Horticulture Architectural Signage & Traffic 	<ul style="list-style-type: none"> Electrical Forklifts AGV Automated Storage and Retrieval Conveyors 	<ul style="list-style-type: none"> Production equipment Wafer processing Backend 	<ul style="list-style-type: none"> Position, Vision & Safety Sensors Process Instrumentation 	<ul style="list-style-type: none"> Battery system Solar inverter Power control system EV Charging
   	   	   	 	   	   	   	   

Key Products – NEMA and Zhaga platform



Outdoor lighting

一、标准/协议


二、Application (streetlighting)

三、TE Lighting products

Outdoor lighting

一、标准/协议

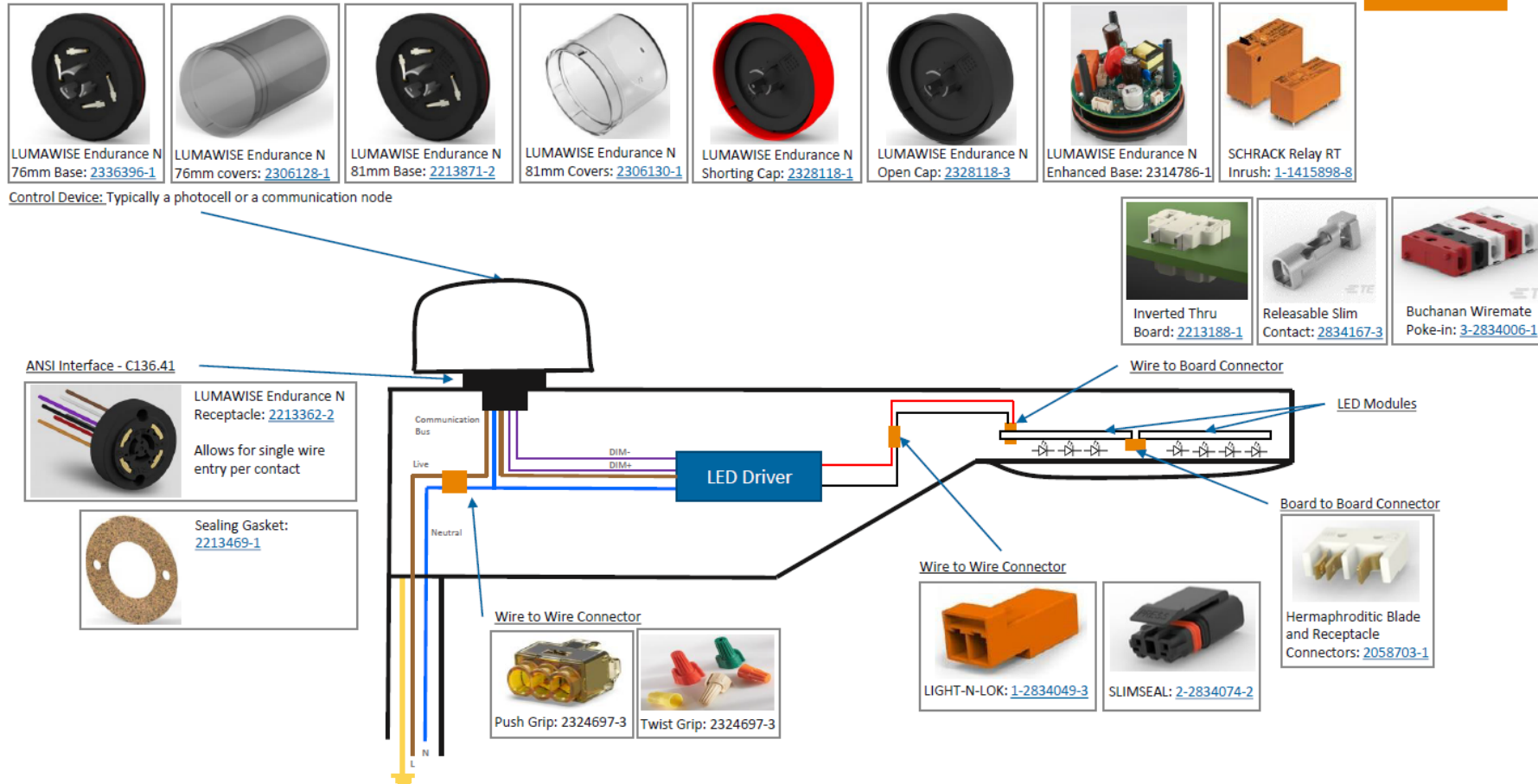
- Zhaga/Zhaga Book 18
- NEMA/ANSI
- DALI, DALI-2
- D4i

<div> <div>ZHAGA Consortium</div> <div>Book 1-25 Overview by application</div> </div>			
	Office & Industry	Retail & Hospitality	Outdoor
Integrated LED light engines	 14  2,8	 17  16	
LED modules (non-integrated)	 7  21  14	 12  9  5  3,10	 4  15  19
Drivers	 13	 22,23	 24,25
Sensor and communication modules		 20	 18

Outdoor lighting

二、Application (streetlighting)

ANSI Single Node Architecture



二、Application (streetlighting)

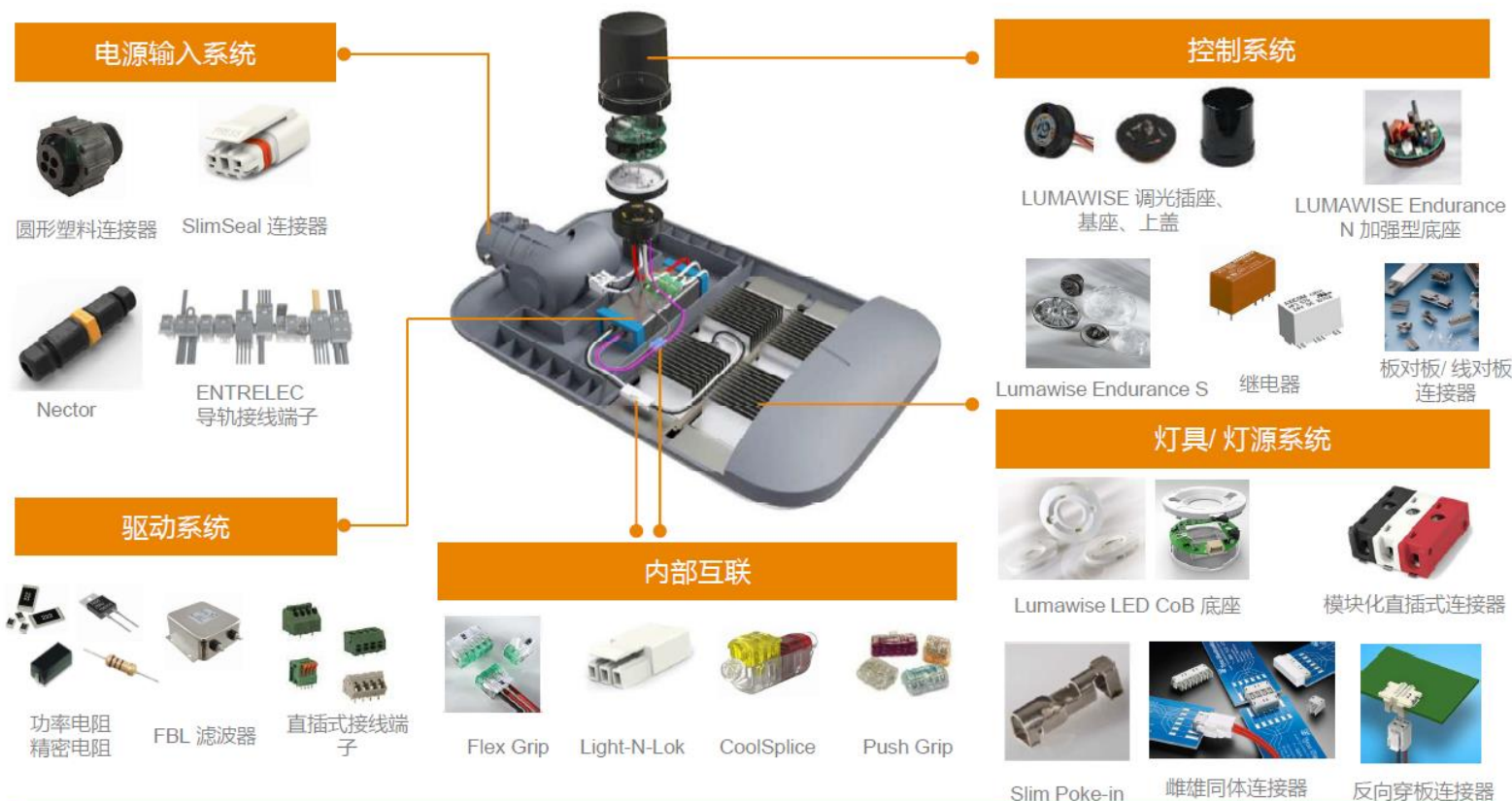
Zhaga Two Node Architecture



Outdoor lighting

二、Application (streetlighting)

LED 智能路灯解决方案



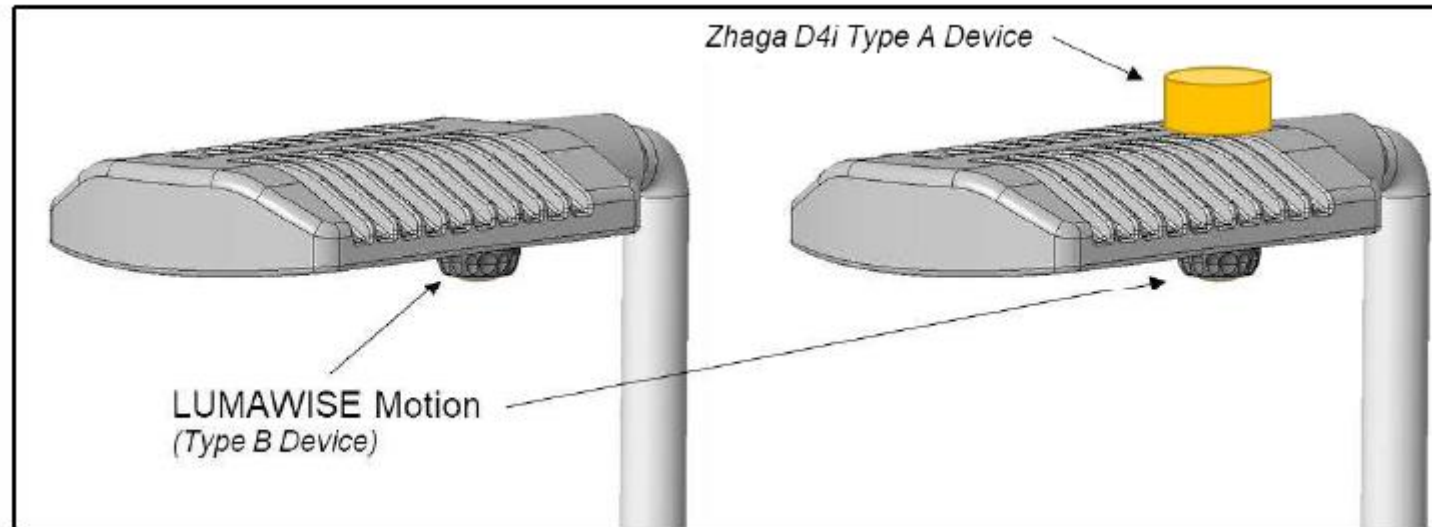
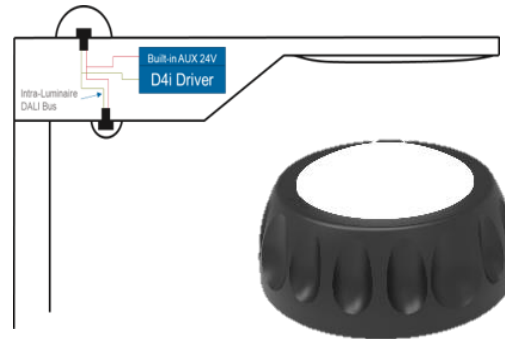
TE致力于为严苛环境的照明应用提供连接器和继电器解决方案。

Outdoor lighting

三、TE Lighting products

Motion Sensor

TE PN: 2388426-1/2/3



LUMAWISE Motion

描述

LUMAWISE Motion是专为路灯研发的移动传感器。基于对移动物体作出判断，通过调节灯亮或熄灯的方式达到节能作用。

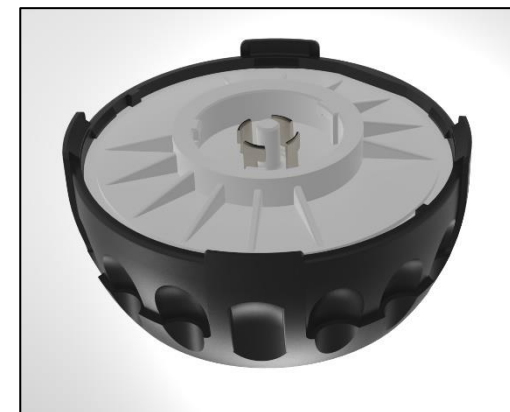
LUMAWISE Motion 符合Zhaga-D4i 照明控制标准。既可以作为独立控制设备也可以与其他节点相互协作，以便达到更好的控制效果。

优势

- 已获得Zhaga-D4i 认证，确保可交互性
- 通过检测移动调节光亮达到节能作用
- 紧凑的设计，保持灯具的美观
- 易安装，连接在灯具下方，方便安装人员直接工作

特征

- 开：35lux，关：18lux
- 无移动：20% 亮度，移动：100% 亮度
- On time: 2 minutes
- 工作高度：5m-12m
- 检测面积：30m×6m(@5m)
- 检测：行人、骑行者和车辆
- 可用面罩检测自定义区域 (Slide 15)
- 通过D4i通信协议进行照明控制
- 直径：80mm
- 平均功耗：6-8mA，启动电流：25mA
- 总线：D4i bus
- IP68 and IK07
- 符合CE标准

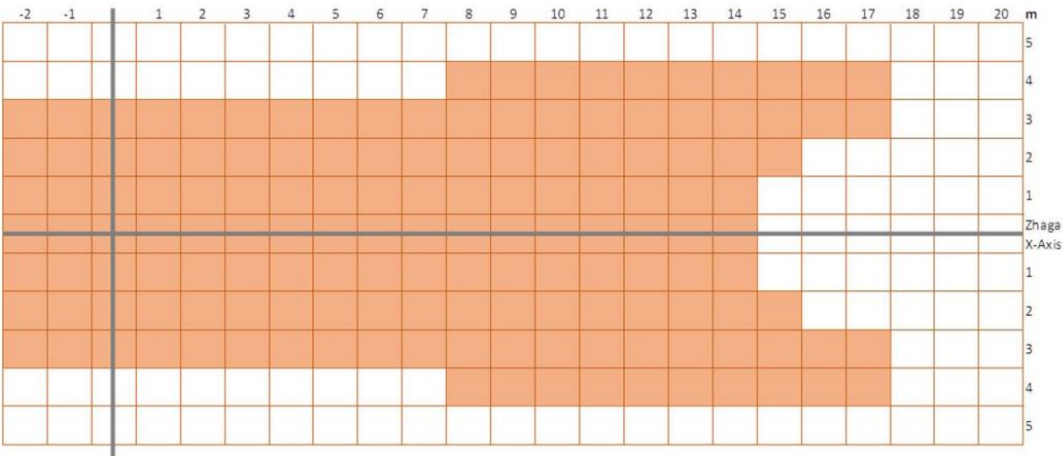


该传感器是一种可插拔设备，具有标准的Zhaga Book 18接口，便于升级。

LUMAWISE Motion

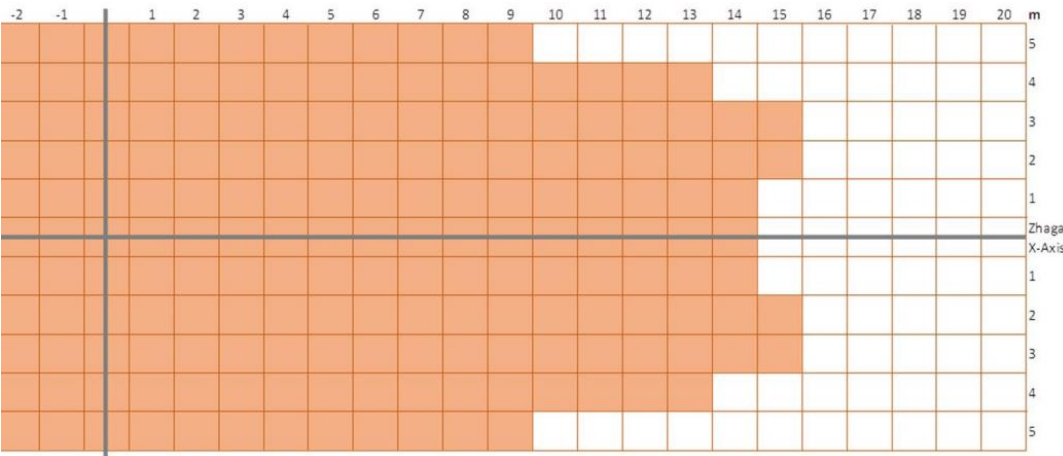
Market Leading Detection Zone

Typical Detection Diagram at 5m Mounting Height



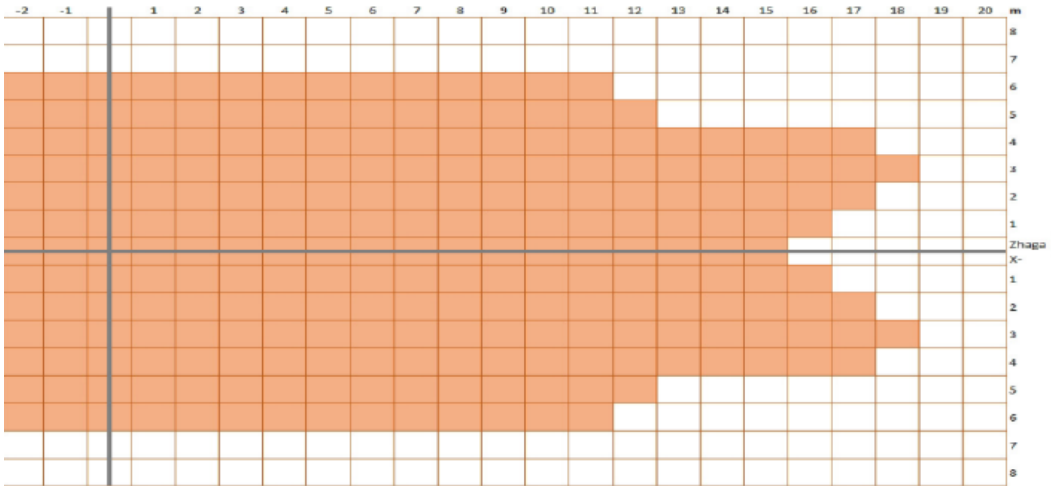
Only one half of detection zone shown

Typical Detection Diagram at 8m Mounting Height



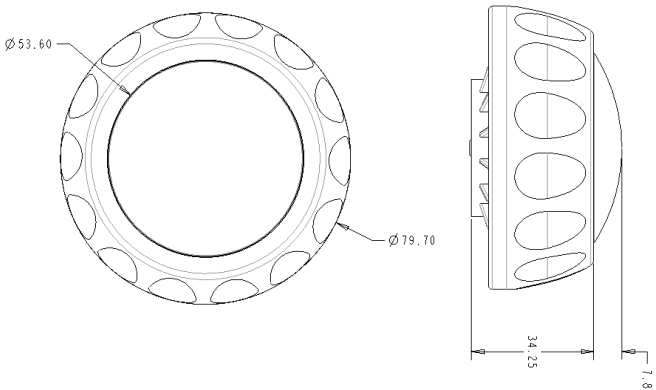
Only one half of detection zone shown

Typical Detection Diagram at 12m Mounting Height



Only one half of detection zone shown

Mechanical Footprint



Masking



Outdoor lighting

Motion Sensor



Outdoor lighting

三、TE Lighting products

LUMAWISE Endurance N (ANSI)



LUMAWISE Endurance S (Zhaga)



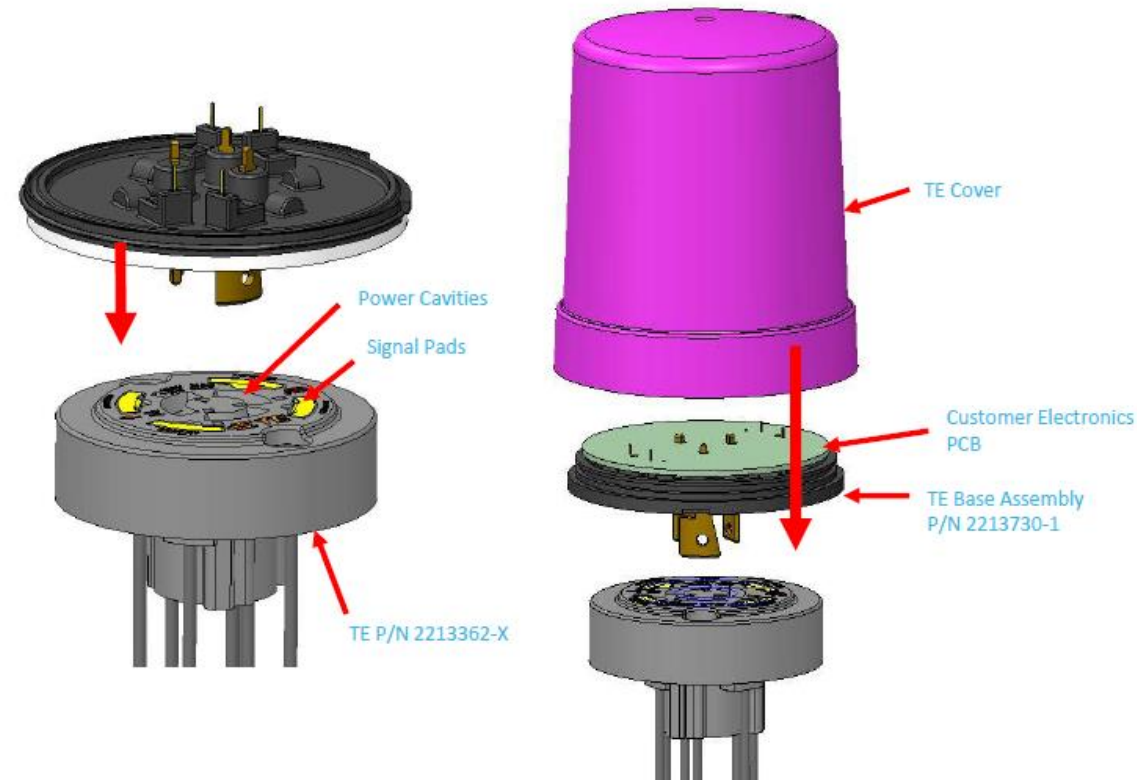
结构对比图



Outdoor lighting

三、TE Lighting products

1. Endurance N



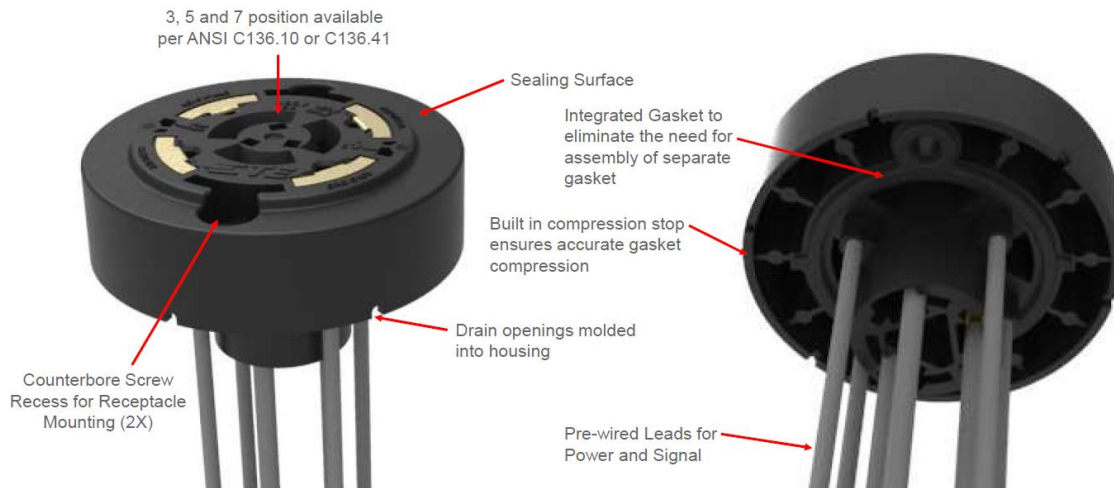
Outdoor lighting

三、TE Lighting products

1. Endurance N

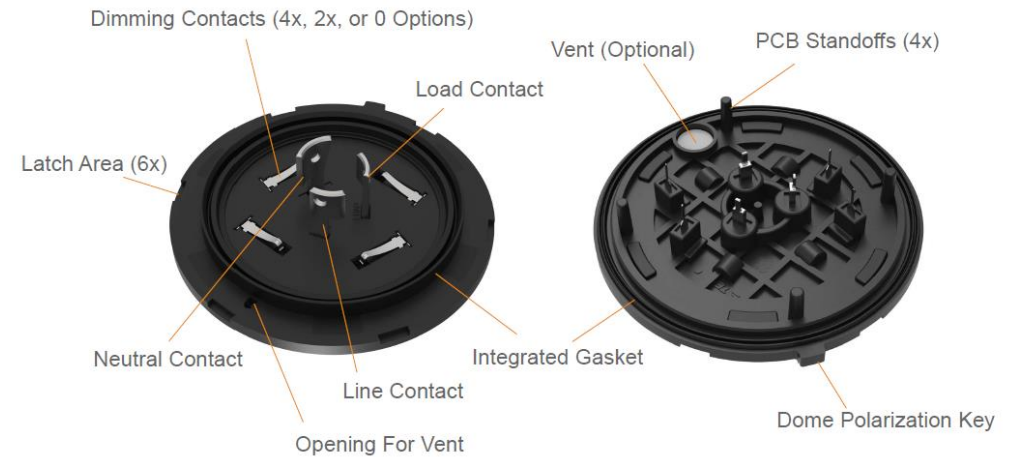
① Receptacle底座

LUMAWISE Endurance N Receptacle Basic



② Base assembly基座

Base Assembly (TE P/N 235948-X)



Outdoor lighting

三、TE Lighting products

1. Endurance N

③ Dome

Dome Options (TE P/N 2359615-X)

Color Options: Clear,
Smoke Gray and Light
Gray



Install/Remove and North Marking



Latches (6x)

Two Dome Heights Available



④ Shorting cap短路帽

Shorting Cap (TE P/N 2361116-X)

Install/Remove Markings



North Marking

Red Dome: Open Circuit
Black Dome: Shorted Circuit

Neutral Contact

Load Contact

Line Contact

Receptacle Gasket



Outdoor lighting

三、TE Lighting products

1. Endurance N

⑤ Photocontrol 光控器



Part Number	Descriptive PN	Color	Energy	Current
2388948-1	ALR-7090-VFS-IP66	Blue	480J	15kA
2388949-1	ALR-7090-VPS-IP66	Blue	480J	15kA

7000 Series – 10Years Life Cycle

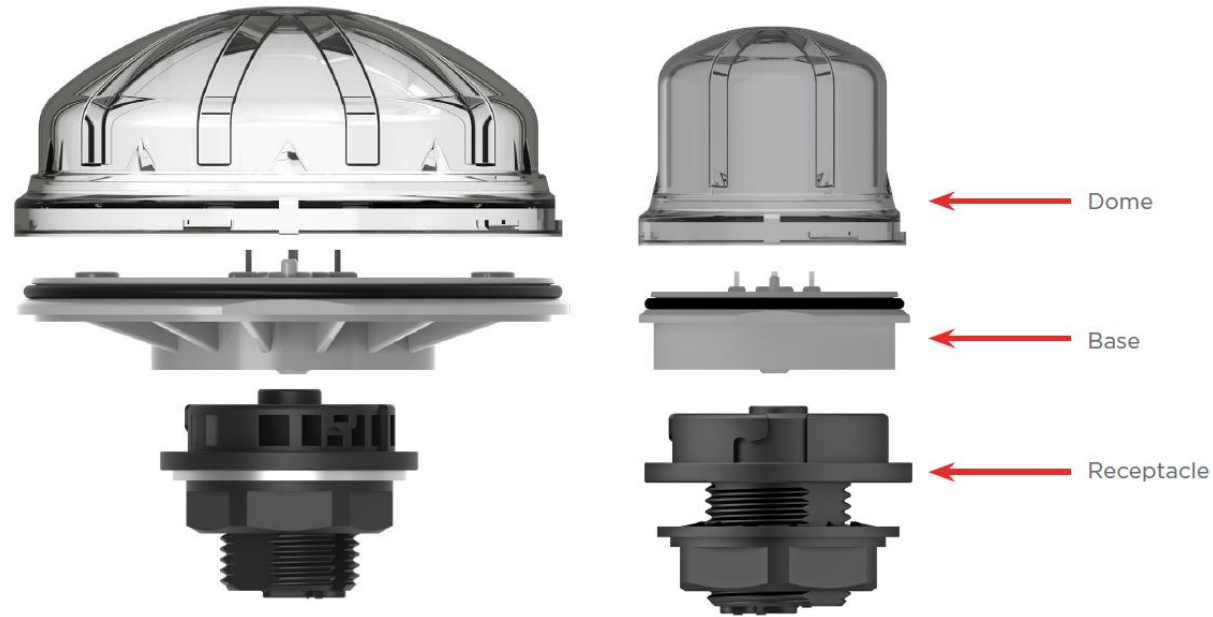
2388950-1	ALR-8090-VFS-IP66	Blue	300J	20kA
2388947-1	ALR-8090-VFS-FO-IP66	Green	300J	20kA

8000 Series – 20Years Life Cycle

Outdoor lighting

三、TE Lighting products

2. Endurance S



Outdoor lighting

三、TE Lighting products

2. Endurance S

LUMAWISE Endurance S产品对应两种连接系统。
一种是Zhaga Book 18，一种是非Book 18，如Z10。

如右图，两种连接系统具有两种不同的连接界面：

- Zhaga Book 18(Standard receptacle)
- Z10(Keyed receptacle)

7. ADDITIONAL STANDARD VERSUS KEYED VISUAL AIDS

The additional visual aids that follow detail the differences between the standard and keyed versions. The standard version is Zhaga Book 18 compliant, while the keyed version is not. The standard version will not mate to the keyed version thus preventing mis-mating when two discrete connectors are used on the same system. The keyed receptacle has a recessed keyway that accepts the keyed module's raised key. The custom-shaped center post of the keyed module prevents mating to the standard receptacle's round hole. In turn, the custom-shaped pre-alignment hole of the keyed receptacle will not accept the round center pre-alignment post of the standard module. See figure 12.

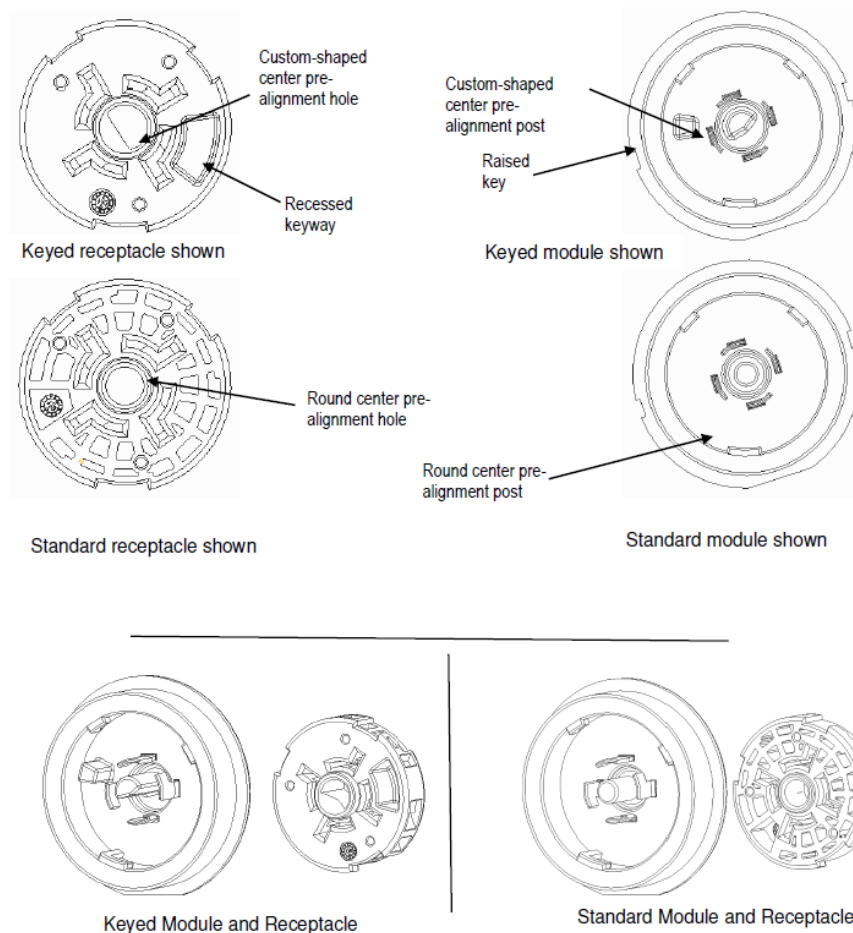


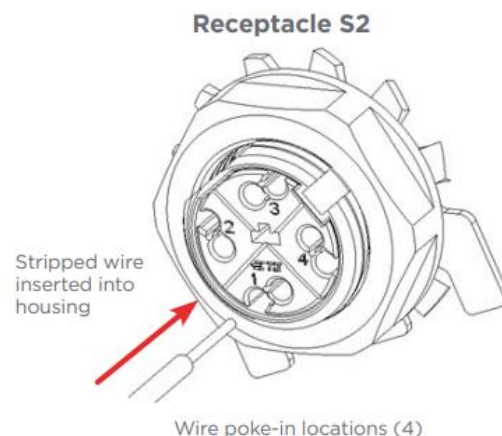
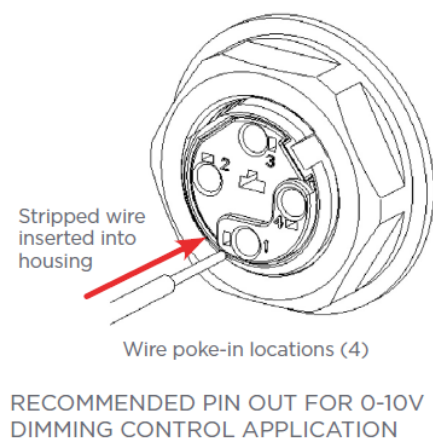
Figure 12

Outdoor lighting

三、TE Lighting products

2. Endurance S

① Receptacle底座

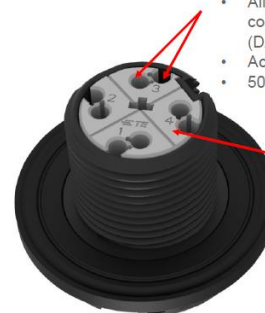


Receptacle S (left) and S2 (right)

LUMAWISE Endurance S S2 Connector System

Product Features

- Dual Wire Poke-In Locations:**
 - Allow for "daisy chain" wiring configurations common with D4i (DALI-2) applications
 - Accept 18/20AWG conductors
 - 50N minimum wire retention
- Light gray resin for higher contrast and easier identification of numbered wire positions



Product Features

- Smooth Top Face:**
 - Improved appearance
 - Allow for identification markings
- Updated Gasket Design:**
 - Built in compression stop
 - Improved resistance to deformation in certain mounting configurations
- Unique Locking Washer:**
 - Integrated D and key to firmly resist rotation of connector
 - Integrated flats allow for easy integration and orientation within luminaire design
 - Allows for the use of a "round" hole within luminaire



S2 插座示意图




上述两种产品分别延伸得到第二代产品：S2插座（S2采用每触点双线解决方案，第一代S1每触点单线）。

Outdoor lighting

三、TE Lighting products

2. Endurance S

② Base 基座

		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

1-2343404-1
LUMAWISE Endurance S Base with Vent
Key A 80mm

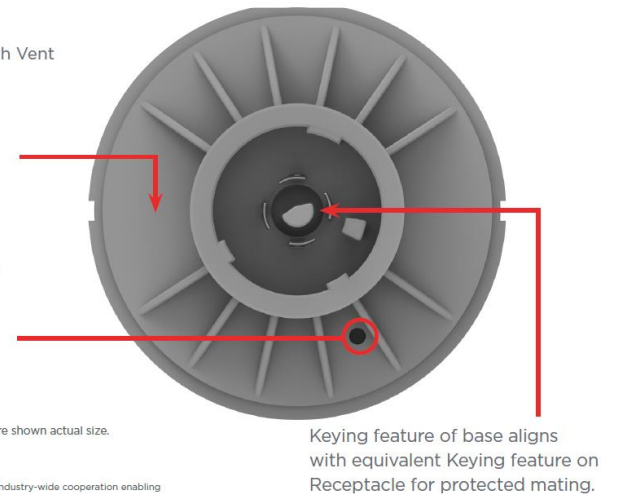
Flat surface for label placement.

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.




Outdoor lighting

TE Lighting products

2. Endurance S

③ Dome

		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)

④ Sealing cap

		Part Number	Description	Color	Key
RECEPTACLE / SEALING CAP		2343403-1	S Receptacle (includes sealing ring, washer & nut)	Black	A
		2363638-2	S2 Receptacle (dual wire poke-in includes sealing ring, washer & nut)	Black	A
		1-2363638-2	S2 Receptacle w/color code (dual wire poke-in includes sealing ring, washer & nut)	Black	A
		2341474-1 2341474-2 2341474-3	Sealing Cap	Dark Gray Light Gray White	A

Outdoor lighting

三、TE Lighting products

Relay-Power PCB Relay RT



- 1 pole 12/16A, 1 form C (CO) or 1 form A (NO) contact
- 2 pole 8A, 2 form C (CO) or 2 form A (NO) contacts
- AC or DC coil
- Cadmium-free contacts
- Reinforced insulation (5 kV / 10 mm coil- contact)
- Standard version 85° C
- HOT version: 105° C
- WG version: product in accordance to IEC60335-1

Standard

RT1	1 pole	12/16A
RT2	2 poles	8A

Inrush

RT Inrush	1 pole	80A
RT iPower	1 pole	120A/165A/ 320A

Bistable

RT1	1 pole	16A
RT2	2 poles	8A

Special

RTH	1 pole	16A / 105°C
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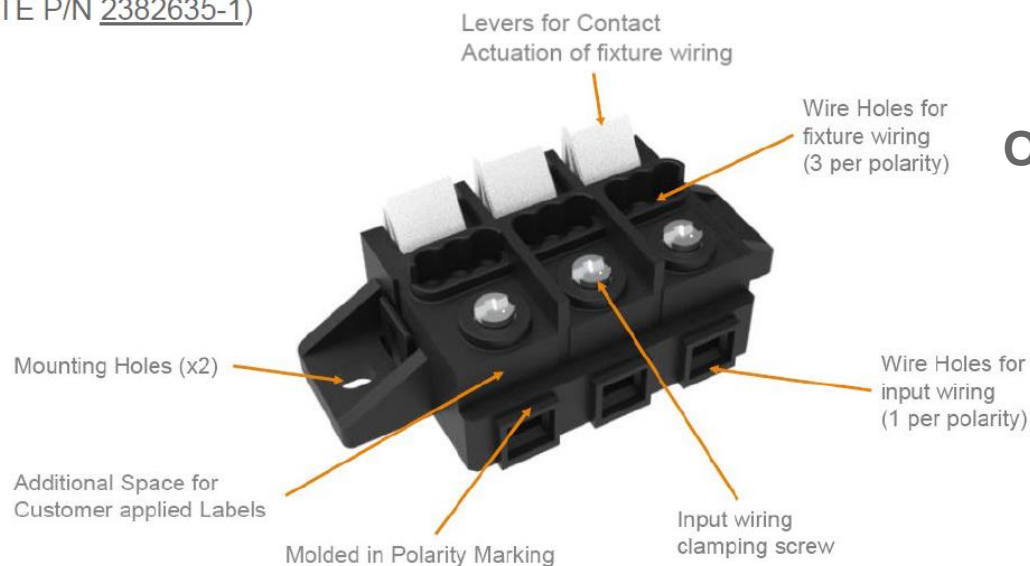
Outdoor lighting

TE Lighting products

LUMAWISE Power Input Terminal Block

Product Features

TB Assembly (TE P/N [2382635-1](#))

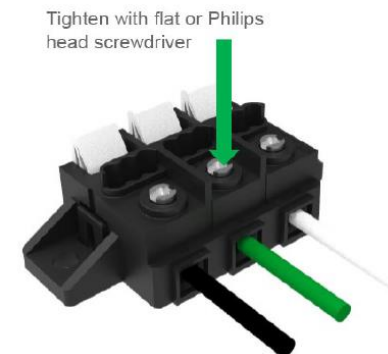


Input Wire Termination

Tighten captive screws to specified torque requirements

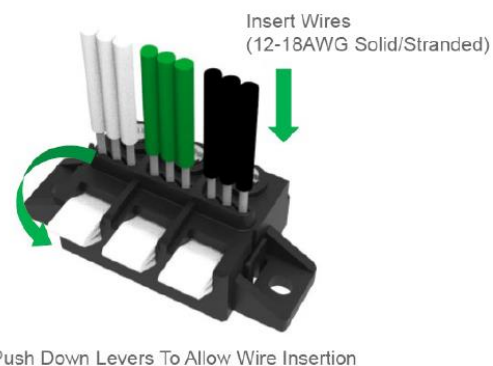


Insert stripped wire leads into rising vice clamp screw connection



Output Wire Termination

Actuate spring clamp levers to closed position to secure the wire insertions



Actuate spring clamp levers to open position prior to wire insertions



Outdoor lighting

TE Lighting products

Cable Glands



Standard Cable Glands

With Thread



Snap-In



Specialized Cable Glands

RJ45



EMC



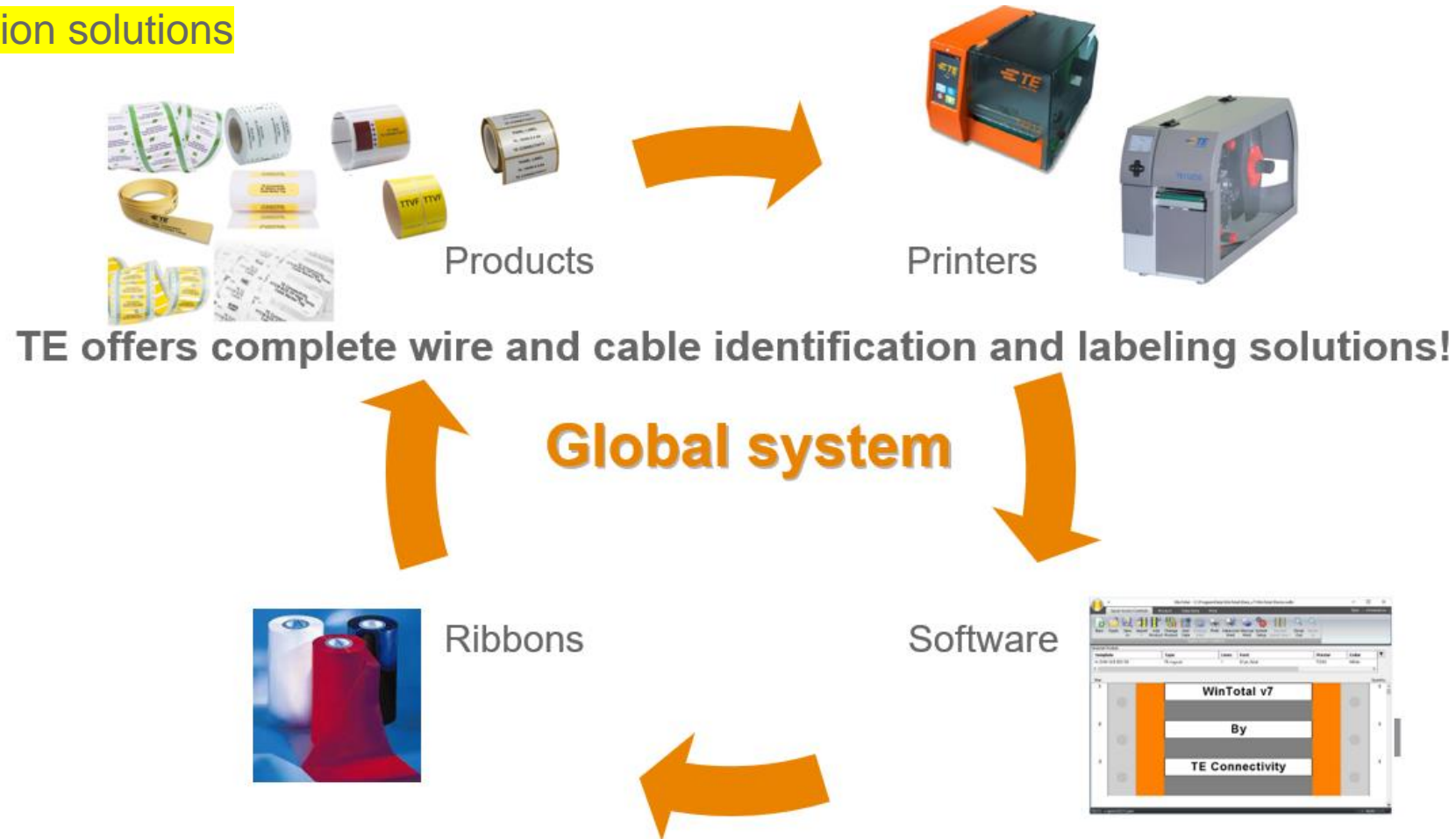
Hygienic



Outdoor lighting

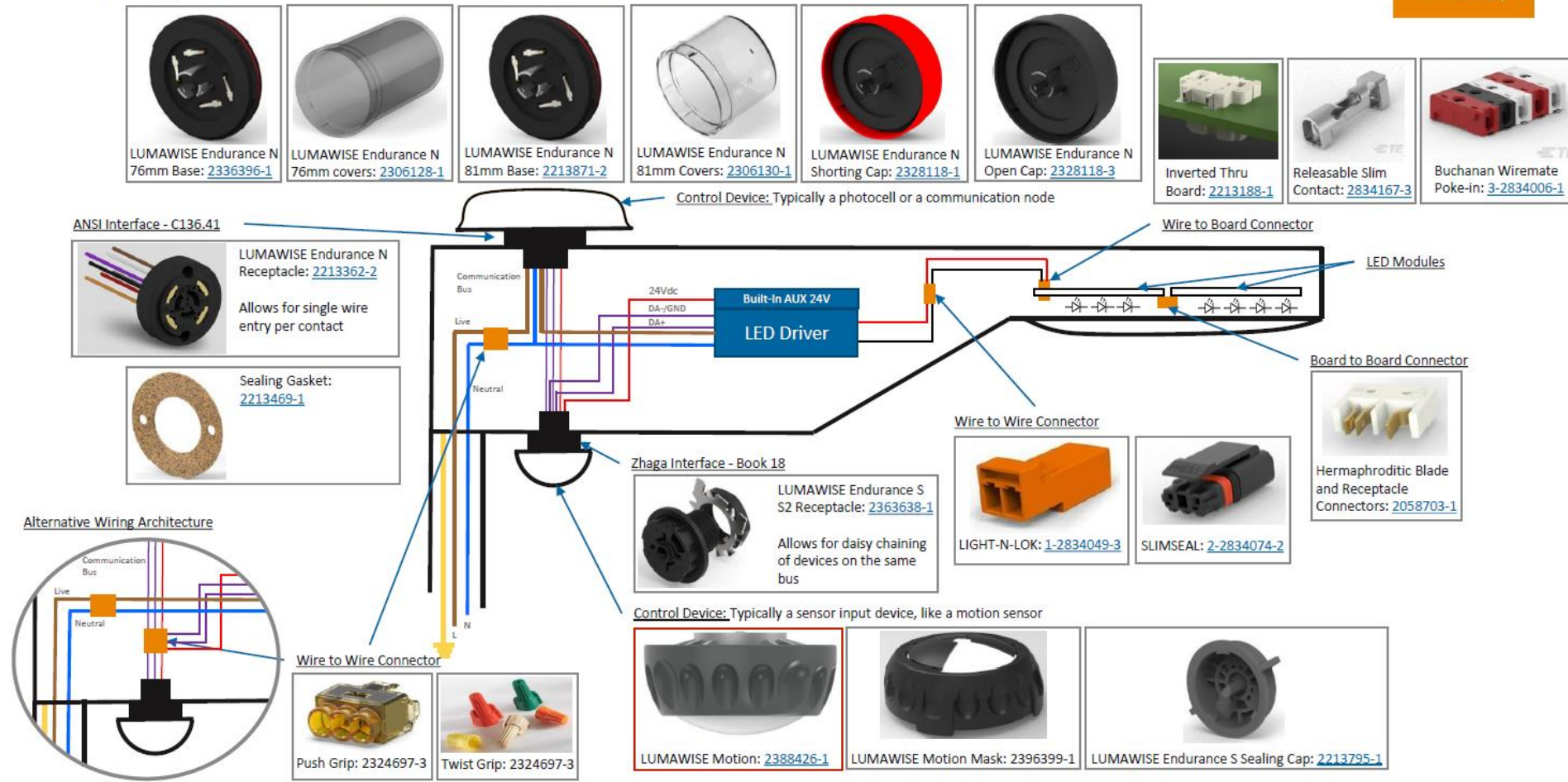
三、TE Lighting products

Identification solutions



Outdoor lighting

Zhaga Two Node Hybrid Architecture



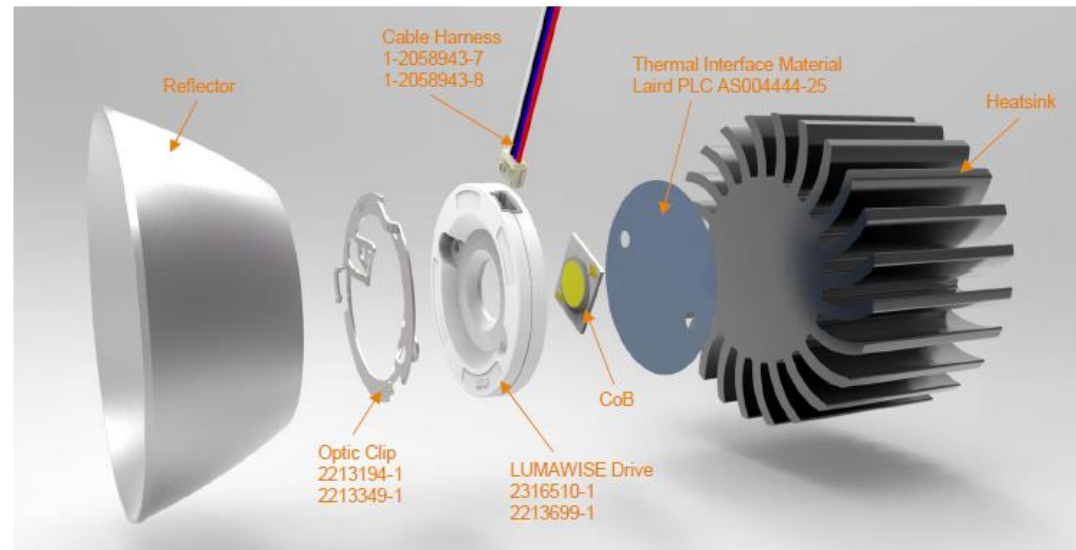
Key Products – General



Indoor lighting

COB Holder

Assembly



Target Industry/Application

- Indoor Lighting
 - High Bay Lighting
 - Cabinet Lighting
 - Down Lights
 - Track Lighting
 - Circular LED light engines



Z45 Holder



Z35 Holder



Z50 Zhaga Holder



Z50 LP Holder



Z50 2828 Holder

Indoor lighting

BUCHANAN WireMate

POKE-IN插入式系列



电气特性

- 额定电流：
6A - 使用18 AWG
5A - 使用20 AWG或22 AWG
- 额定电压：
最大400 VAC
- 介电强度：
1800 VAC

机械特性

- 工作温度：
-40°C - +105°

技术规格

- 应用规范：
[114-137055](#)
- 产品规范：
[108-137055](#)
- 经过UL认证：
UL1977
- IEC60838,符合IEC 60598-1条款15

材料

- 端子：
镀锡铜合金

主要优势

- 模组化工艺为设计提供灵活性
- 具有插入式端子特性，可轻松快速完成安装
- 颜色配置可轻松识别
- 设计紧凑，节省空间
- 间易退线结构机制，便于客户维护

Target Industry/Application

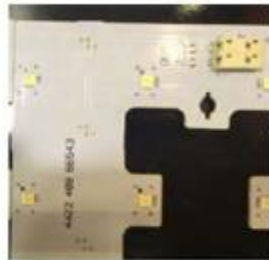
- Indoor Lighting
- High Bay Lighting
- Cove Lighting
- Cabinet Lighting
- Down Lights
- Track Lighting
- 2 X 2 / 2 X 4 Troffers
- Linear LED light engines
- Circular LED light engine

Indoor lighting

BUCHANAN WireMate

Illuminator (WtB)

> Colored Modular Releasable Poke-In



Key Product Nbr.:
 2834006-1 1 Position - Nature
 2834006-2 2 Positions - Nature



Demo Board is ready for distribution – Talk with your Local PM

- SMT
- Modular, Up to 5P
- Colored
- Poke-In Type
- UL1977 and IEC approval
- For 18-22AWG Solid/ Tin-Dipped Stranded Wire
- 400V, 6A

Same Layout – Direct replace



Indoor lighting

BUCHANAN WireMate

POKE-IN纤薄型插入式系列

电气特性

- 额定电压：最大300 VAC
- 介电强度：2000 VAC

机械特性

- 工作温度：- 40°C 至 +125 °C
- 导线保持力：最小30N
- 额定电流：请参考下表

材料

- 端子：镀锡铜合金

产品规格

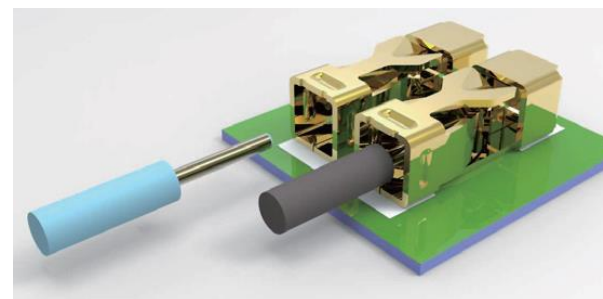
- 应用规范：[114-137049](#)
- 产品规格：[108-137049](#)

产品合规/认证

- UL认证：UL1977

主要优势

- 无焊接插入设计便于快速安装
- 纤薄型端子设计可实现尺寸和成本节约
- 接受16AWG 至24AWG多种线径规格，兼容实心线和绞线
- 通过UL和CQC认证
- 卷带包装和线盘包装可选



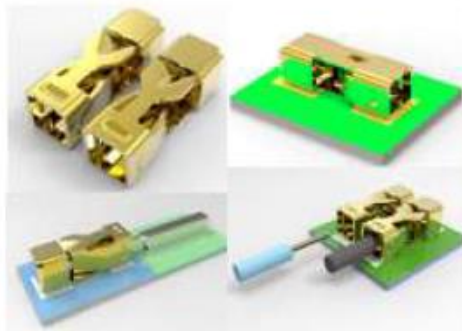
额定电流					
产品料号	16 AWG	18 AWG	20 AWG	22 AWG	24 AWG
2834010-3	-	-	11 A	8 A	6 A
2834012-3	16 A	13 A	11 A	-	-

Indoor lighting

BUCHANAN WireMate

Slim Lighting (WtB)

➤ *SMT Releasable SlimContact and Ultraminiature SlimContact*



- 300V 9A @18AWG
- Releasable
- UL1977



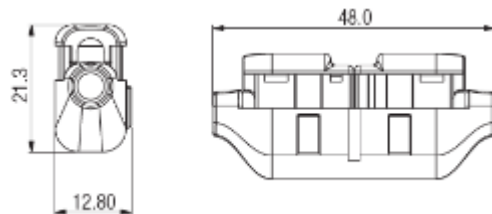
- 300V 6A @20AWG
- Ultra-Slim @1.85mm Height
- UL1977

Indoor lighting

Coolsplice

- IDC Technology 绝缘刺破连接技术 (Insulation Displacement)
- 适用参数: from 0.75 to 4 mm² - 18 to 12 AWG (color coded: Red, Blue Yellow)
- Ingress Protection : IPX8
- 电压等级: 600 V (IEC and cULus)
- 电流等级:
 - **Yellow** – 12 AWG: 20 A
 - **Blue** – 16...14 AWG: 15 A
 - **Red** – 18 AWG: 10 A

- 尺寸 (mm):



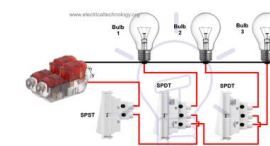
- Products Compliance / Approvals:
 - IEC 60998-2-3
 - UL 486C – CSA C22.2 No. 188-13



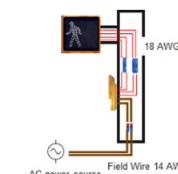
Street Lighting



Tunnel Lighting



Cross Walk Button and Sign



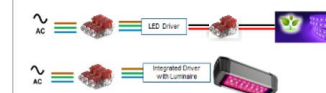
Commercial Refrigerator Lighting



LED High Bay



Horticulture Lighting



Indoor lighting

LIGHT-N-LOCK

LIGHT-N-LOK POKE-IN CONNECTORS



Designed for tool-free installation

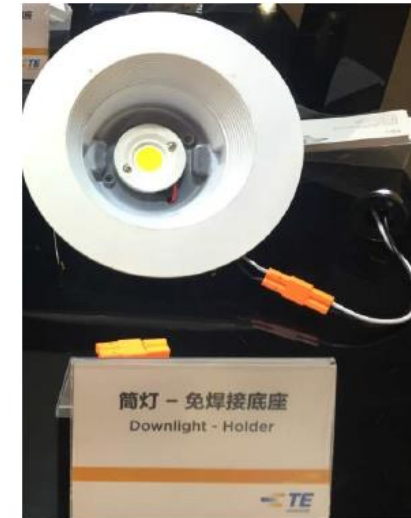
- Wire to Wire
- Easy to install
- Poke-In
- Polarized

Friction Lock

- 2 position
- 18-22 AWG

Positive Latching

- 2 and 3 position
- 16-20 AWG
- colored modules interlock



Indoor lighting

> Mini SlimSeal IP67 WtW Connector



- Pneumatic Control System
- Inverter/ Drive (LV&MV)
- **Special Machinery**
- **Industrial Robot**
- Mirror harness
- Lamp harness
- Air conditioning system - HAVC
- Powered rear view mirrors
- LED street lights
- Vending machines
- Heated toilet seat

Target Application

- Cooling Fans To Inverter
- HVAC – Driver
- 智能卫浴 Smart Bathroom
- 车灯 Car Lighting
- EV Charger / & Station
- 户外灯具模组 Outdoor lighting Module
- 扫地机 Sweeper / 吸尘器 Cleaner
- 无人机 UAV – Unmanned aerial vehicle)



In drives for cooling fan application in the frequency converter



Indoor lighting

Horticulture Lighting

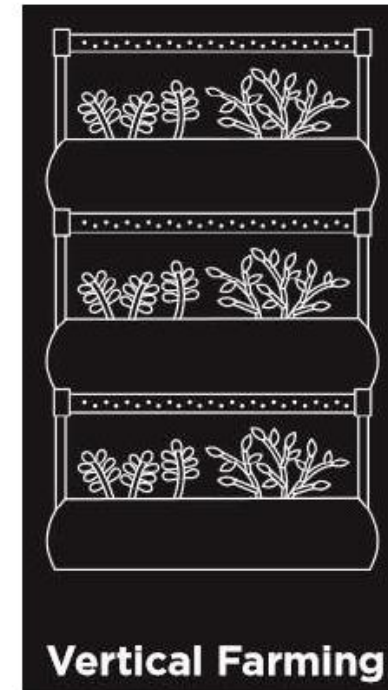
Greenhouse Farming



Warehouse Farming

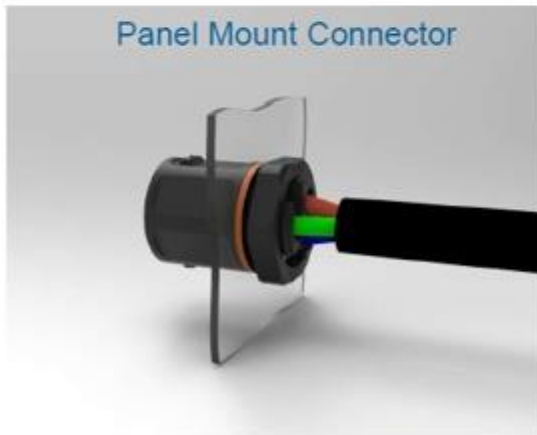


City Farming



Indoor lighting

Nector T Sealed: **Pluggable:**



TE Connectivity Confidential & Proprietary. Do not reproduce or distribute.

Key Features	
No of poles	3
Rated Voltage	600 V
Wire size	16 AWG to 10 AWG (0.75mm ² to 4.0mm ²)
Operating Environment	-40°C to 85°C 95% Humidity
Materials (plastic)	UL V-0, UL-F1 rated
Cable range	Ø6.0 to Ø14.0 OD
Certifications	IEC 61984 & IEC 61535 UL2238 & UL8800
IP protection	IP67/IP68

Indoor lighting

Relay-P2 Relay



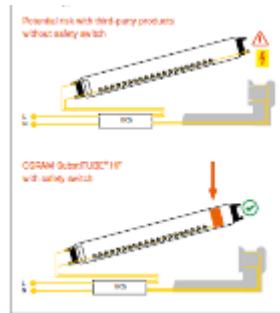
- New P2 Relay to meet VDE requirements for LED Tubes and High Dielectric Strength of 4kV

P2 Lighting



VDE Approved,
open contact
gap 0.75mm

Target
Applications:
LED Tubes
IEC62776,
IEC61347-1



Key Features

- 2 C/O, 2A contact load
- Coil types: Mono-stable 200mW and Bi-stable (single) 140mW
- **Contact gap 0.75mm**
- **1,500Vrms open contact**
- **4,000Vrms coil –contact**
- **Dimension & pin layout no change**
- THT / SMT Option

**WHEN
TECHNOLOGY
CONNECTS,
SO DOES HUMANITY.**

EVERY CONNECTION COUNTS



RESOURCE

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