

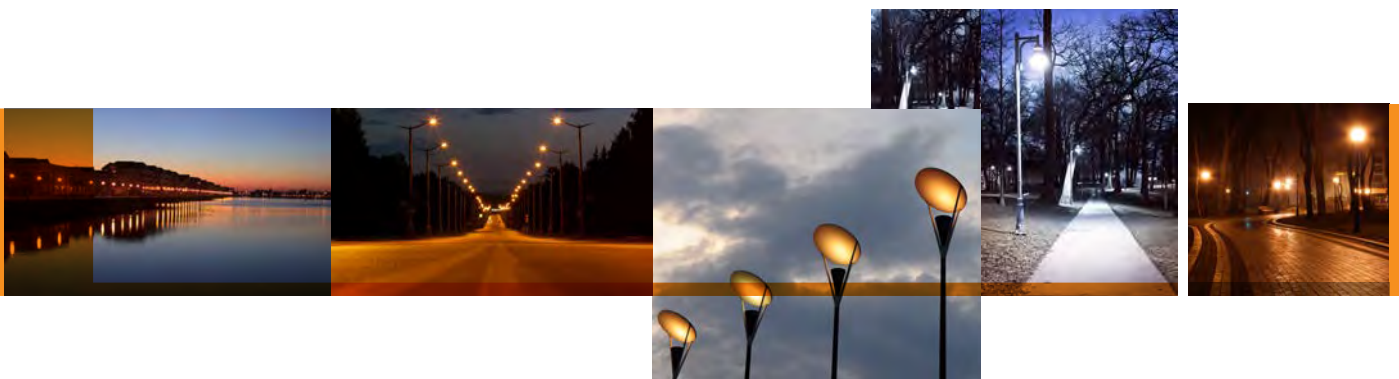
# STREET LIGHTING PHOTOCONTROLS



# A COMPREHENSIVE PORTFOLIO FOR STREET LIGHTING APPLICATIONS

For more than 50 years, TE Connectivity (TE) and its well-known ALR product line have supported utilities, city authorities and contractors with safe and reliable connection boxes and accessories for lighting poles for a variety of street lighting applications including:

- Public street lighting
- Private outdoor lights for parking lots and apartment buildings
- Industrial settings such as refineries and power plants
- Infrastructure, including harbours, airports and rail stations





# 8000 SERIES PHOTOCONTROL ELECTRONIC, ULTRA LONG LIFE, HIGH PERFORMANCE

TE Connectivity's (TE) advanced technology 8000 Series Photocontrol provides a unique, durable, and multi-volt control especially designed for twenty year operation.

Aluminium electrolytic capacitors have a rated lifetime of only 5000 hours at 105°C. TE has eliminated electrolytic capacitors in the 8000 series, resulting in a truly long life control. Double-sided, plated-through, glass epoxy FR4 circuit board along with a 30 Amp rated at 120VAC relay ensures that our control will surpass 20,000 ON/OFF operation cycles per ANSI C136.10.

Like all of TE's electronic controls, the 8000 Series utilises our inter-locking base/cap design for excellent environmental housing. High temperature base material, rated at a minimum 138°C, along with a UV stabilised, opaque housing ensure our control will last over 20 years without degradation.

TE uses a process of IR filtering a phototransistor which in turn gives a human eye response along with long-term, drift free light sensing for the life of the control.



## KEY FEATURES

- Multi-volt operation
- High-temperature housing and components
- 25 mm, 20 kA, 300 Joule MOV Standard
- Meets or exceeds ANSI C136.10

SPECIFICATION - DIMENSIONS IN MM	
<b>Physical</b>	Dimensions: approx. 83mm dia. x 45mm high (not including contacts)
	Enclosure: designed to meet ANSI C136.10
	Power consumption: less than 0.5 watts at 120 VAC
<b>Temperature</b>	Minus 40°C to plus 65°C at 96% RH
<b>Control</b>	DC Electromagnetic switch type exceeds 20,000 ON/OFF operations per ANSI C136.10
<b>Relay Rating</b>	30 Amp General Purpose Relay
<b>Load Rating</b>	1000 Watt Tungsten 1800 VA
<b>Light Sensor</b>	Non-drifting Phototransistor
<b>Cover</b>	High impact polypropylene with UV stabilised polycarbonate window
<b>Base</b>	High temperature polyester (PBT)
<b>Gasket</b>	Cross-linked polyethylene
<b>Connection</b>	3-pole locking-type with solid brass legs

## HOW TO SPECIFY

The 8000 series offers almost unlimited options ensuring your lighting network needs will be met.

### 8 0 90 - V F S - \_ \_ - \_ \_

**Series (Fail Mode)**

8 = 8000 (ON)

**OFF/ON Ratio**

0 = 1.5 : 1

**Voltage**

90 = 120/208/240/277

**MOV Surge Protection**

V = 300J, 510V, 20,000A, 25mm

**Light Sensor**

F = IR Filtered Phototransistor

**Cap Color**

(Leave blank if ANSI Standard)

BL = Blue

BK = Black

BR = Brown (Bronze)

GN = Green

GR = Gray

MR = Maroon

YL = Yellow

OR = Orange

**Fail OFF Option**

FO = Fail OFF Option  
(leave blank if Fail ON)

**Turn-On Level**

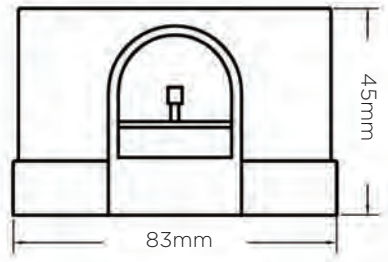
1 = 1.0 Fc

S = 1.5 Fc (ANSI Std)

2 = 2.0 Fc

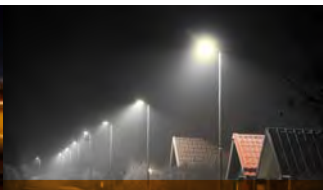
3 = 2.6 Fc

ANSI Standard	Fail	Fail
Cap Colours	ON	OFF
120V	Grey	Orange
208/240/277V	Maroon	-
120/208/240/277V	Blue	Green



### TECHNICAL INFORMATION

Rated Volts	105 - 305 VAC
Frequency	50/60 Hz
Operating Light Levels	Standard 1.5 Fc ON (optional 1 - 3 Fc)
Time Delay ON/OFF	Instant ON, 2 - 5 second delay OFF
OFF/ON Ratio	1.5 : 1
Fail Mode	ON or OFF
Surge Protection	25 mm, 20 kA, 300 Joules MOV
Rated Life	20 years



# D2 SERIES PHOTOCONTROL EXTENDED LIFE

TE Connectivity’s advanced technology Extended Life D2 Series Photocontrol provides a unique mix of low-cost, long-life, and small form factor for demanding Roadway and Specialty Lighting applications.

TE has developed a new EL (Extended Life) - series as part of the D2 offering, providing greater benefits and improved performance over the original model.

It utilises advances in ultra-low power microcontroller technology to halve power consumption from our original model while increasing load switching capability (including loads with phase correction capacitors). It also incorporates a 320J MOV for enhanced protection of the luminaire from line transients. This level of protection has only previously been available in the larger NEMA photo cells.

The new D2 photo cell improves on the performance of the original model by incorporating a heavy-duty relay manufactured by TE. This relay is assisted by a triac that eliminates contact welding when driving large luminaires with PFC capacitors. The triac conducts at the line zero-crossing point during lamp turn-on, charging any load capacitance before the relay contacts close. This also reduces sags and surges on the network caused by the luminaire switching.



## KEY FEATURES

- Premium utility grade control
- High reliability, long life
- High-temp housing and components
- 320 Joule MOV standard
- Extremely reliable versatile design applications

SPECIFICATION - DIMENSIONS IN MM	
<b>Physical</b>	Dimensions: 27.23mm dia. x 64.88mm high ( including contacts)
	Enclosure: UV stabilised
	Polypropylene Cover and Hi-Temperature Polyester (PBT) Base
<b>Temperature</b>	Power consumption: less than 0.5 watt
<b>Control</b>	Minus 40°C to plus 65°C @ 96% RH
<b>Relay Rating</b>	Intelligent electromagnetic switch exceeds 20,000 ON/OFF operations 16A
<b>Load Rating</b>	700 Watt Tungsten, 700 VA Ballast
<b>Light Sensor</b>	Non-Drifting Phototransistor

## HOW TO SPECIFY

The D2 Series provides many options ensuring your lighting network needs will be met.

### D2 A - E 2 2 I

#### SERIES (FAIL MODE)

D2 = D2 (ON)

#### MARKET

A = ANZ

J = Japan

#### CIRCUIT CONFIGURATION

E = Extended Life

#### ON TIME DELAY

I = Instant

F = 2.5 Seconds

T = Customer Defined Delay\*

#### OFF/ON RATIO

1 = 1.5:1

2 = 2:1

3 = 0.6:1

#### TURN-ON LIGHT LEVEL

1 = 10 lux

4 = 25 lux

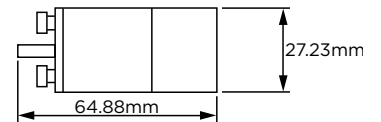
2 = 15 lux

5 = 30 lux

3 = 20 lux

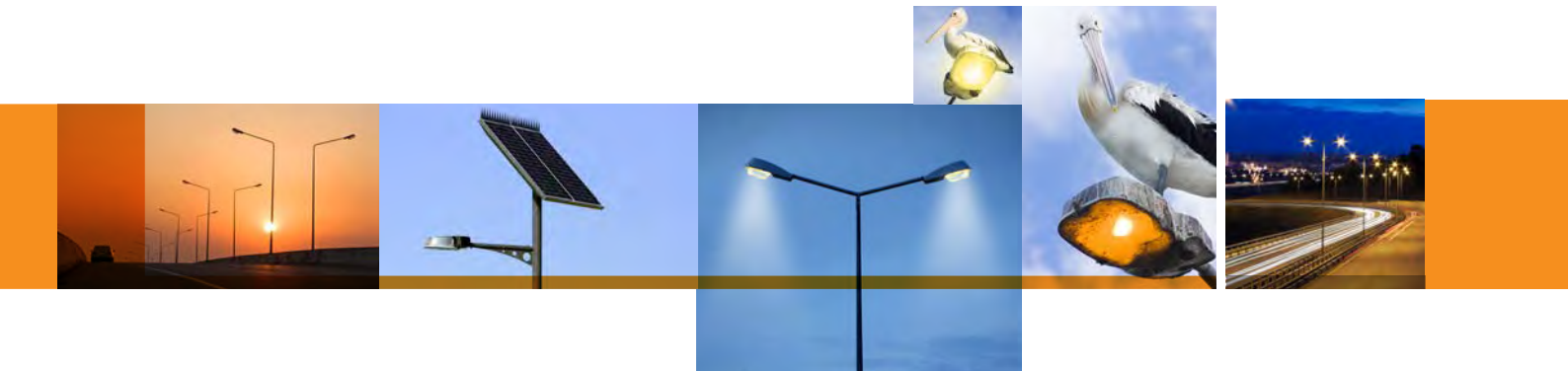
6 = 35 lux

\*For Customer Defined Delay, there is a 60 second test mode on start up where it will be Instant ON/OFF. Once test mode is complete, the unit will function according to the specified ON/OFF Time Delays. This will assist field staff in testing the functionality during installation.



## TECHNICAL INFORMATION

Rated Volts	185 - 305 VAC
Frequency	50 Hz
Operating Light Levels	Standard 10 lux ON (Optional 10-35 lux)
Time Delay ON/OFF	Instant ON 2-5 Second Delay OFF
OFF/ON Ratio	1.5 : 1    2 : 1    0.6 : 1 (Inverse Ratio)
Fail Mode	ON
Surge Protection	320 Joules
Rated Life	20 years



# SHORTING AND OPEN CAPS

## DURABLE, WEATHERPROOF, LONG LASTING

TE Connectivity (TE) offers durable weatherproof shorting and open caps. Common uses include designating fixtures for maintenance, keeping lights continually on for safety (shorting cap), or disconnecting service when lighting is no longer needed (open cap).

SC, MC and NS caps provide a convenient and economical method to close or open the primary circuit with a NEMA locking type receptacle. The MC-10 model also incorporates a 545 Joule Metal Oxide Varistor (MOV) that protects the cap and the luminaire from transient line surges.

Designating ANSI in the part number will provide a unit with a stepped housing dictated in the ANSI C136.10 specification. This unique housing makes it easier for users to distinguish visually between a standard photocontrol and a shorting or open cap.

Shorting and non-shorting models are available as well as optional surge protection (545 Joule).

## DESIGNATE FIXTURES INOPERABLE OR FOR MAINTENANCE

THE SC, MC & NS SERIES ARE THE RESULT OF OVER FIFTY YEARS OF EXPERIENCE DESIGNING AND DELIVERING SUPERIOR PHOTOCONTROLS AND OTHER LIGHTING ACCESSORIES AROUND THE WORLD.





## SPECIFICATION - DIMENSIONS IN MM

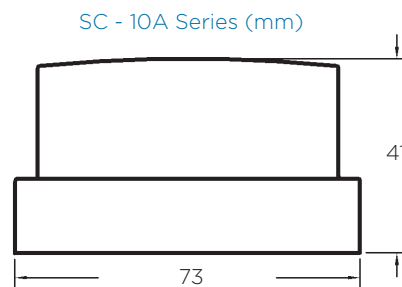
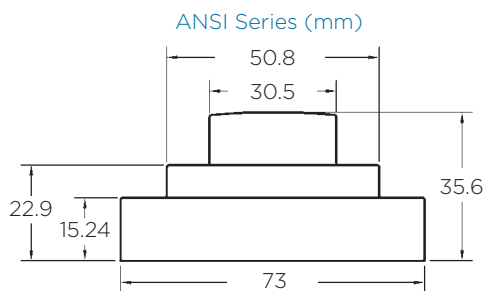
<b>Physical</b>	SC - 10A Dimensions: approx. 73mm dia x 41mm high (excluding contacts)
	SC - 10 ANSI, MC - 10 ANSI, NS - 10 ANSI: Dimensions: approx. 73mm dia. x 35.56mm high (excluding contacts)
<b>Temperature</b>	Minus 40°C to plus 65°C at 96% RH
<b>Cover</b>	High impact polypropylene (ANSI Series)
	High impact UV stabilised polycarbonate (SC - 10A Series)
<b>Base</b>	High temperature polyester (PBT)
<b>Gasket</b>	Cross-linked polyethylene
<b>Connection</b>	3-pole locking-type with solid brass legs

## PRODUCT SELECTION INFORMATION

Description	Circuit Type	Cap Colour	Load Rating Tungsten (Watts)	Load Rating Ballast (VA)	Surge Protection (Joules)
<b>SC-10A*</b>	Shorting	Clear	1000	1800	—
<b>SC-10ANSI**</b>	Shorting	Black	1000	1800	—
<b>MC-10ANSI**</b>	Shorting	Black	1000	1800	545
<b>NS-10ANSI**</b>	Open	Red	1000	1800	—

\* UL Listed

\*\* ANSI C136.10-2006 Compliant



# LC SERIES PHOTOCONTROL THERMAL, LOCKING STYLE, RESIDENTIAL GRADE

TE Connectivity's (TE) LC Series offers a locking style control ideal for residential lighting applications. The LC Series locking-type photocontrol offers an economical and cost-effective means of controlling residential lighting systems from dusk to dawn.

A heavy-duty thermal bi-metal switch that produces a minimum 30 - 45 second time delay, virtually eliminating unwanted OFF/ON operations that could result from lightning, car headlights or other sudden changes in the ambient outdoor light level.

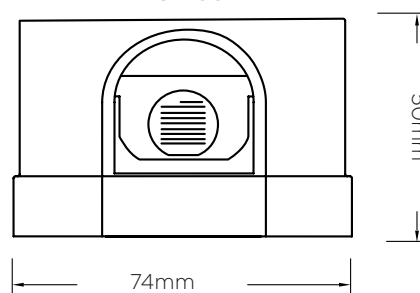
LC controls are a perfect and reliable solution for lighting driveways, patios, decks, entryways or other areas around the home where security lighting is desired

## HEAVY-DUTY THERMAL BI-METAL SWITCH

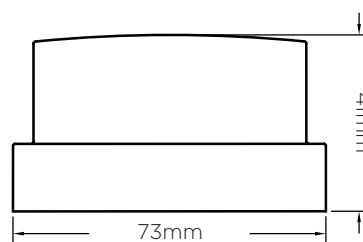
THE LC SERIES IS THE RESULT OF OVER FIFTY YEARS OF EXPERIENCE DESIGNING AND DELIVERING SUPERIOR PHOTOCONTROLS AND OTHER LIGHTING ACCESSORIES AROUND THE WORLD.



ALR-LC-208-277



ALR-LC-120



## SPECIFICATION - DIMENSIONS IN MM

<b>Physical</b>	Dimensions: approx. 73mm dia x 41mm high (LC-120)
	Enclosure: designed to meet ANSI C136.10
	Power consumption: less than 0.9 watts (avg.) at 120 VAC
<b>Temperature</b>	Minus 40°C to plus 65°C at 96% RH
<b>Switch</b>	SPST thermal bi-metallic Exceeds 7500 ON/OFF operations at rated load
<b>Load Rating</b>	1000 Watt Tungsten 1800 VA ballast
<b>Cover</b>	High impact Noryl with UV stabilised acrylic window
<b>Base</b>	High temperature polyester (PBT)
<b>Gasket</b>	Cross-linked polyethylene
<b>Connection</b>	3-pole locking-type with solid brass legs
<b>Light Sensor</b>	1/2" Cadmium Sulfide (Cds) Cell

## TECHNICAL INFORMATION

<b>Rated Volts</b>	105 - 305 VAC
<b>Frequency</b>	50 - 60 Hz
<b>Operating Light Levels</b>	Standard 1.5 Fc ON
<b>Time Delay</b>	30 - 45 Second Delay ON and OFF
<b>OFF/ON Ratio</b>	4 : 1
<b>Fail Mode</b>	ON
<b>Rated Life</b>	4 years

## PRODUCT SELECTION INFORMATION

Description	Rated Volts	Range (Volts)	Rating Tungsten (Watts)	Rating Ballast (VA)	Turn ON (Fc)	OFF/ON Ratio	POP Pkg.
<b>LC-120</b>	120	105 - 130	1000	1800	1.5	4 : 1	Yes
<b>LC-208-277</b>	208/240/277	185 - 305	1000	1800	1.5	4 : 1	Yes



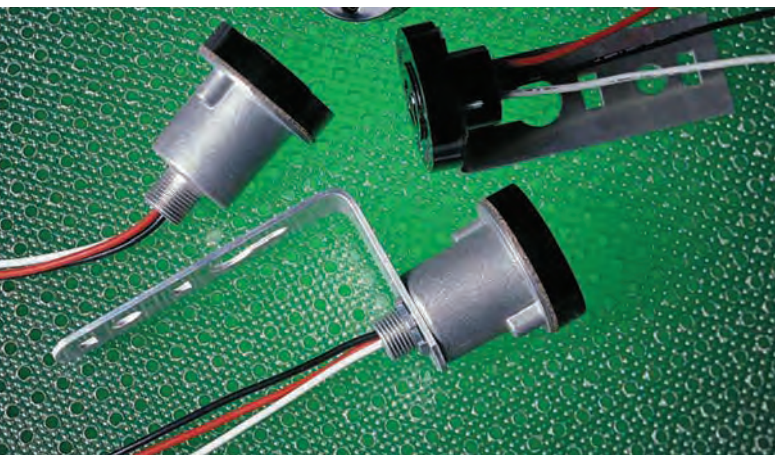
# AM SERIES RECEPTACLES

## LOCKING TYPE, WEATHERPROOF, LONG LASTING

TE Connectivity (TE) offers a long life and weatherproof locking style receptacle. The AM Series is designed specifically for street, roadway and outdoor lighting applications.

This 3-pole, 3-wire locking type receptacle conforms to the ANSI, NEMA, and UL standards for lighting receptacles. The AM-1-A and AM-2-A includes mounting brackets.

Common uses for the AM Series Receptacles include roadway, park, and parking lighting.



### KEY FEATURES

- Phosphor bronze contacts
- Thermal-set phenolic base
- UL recognised component
- Extremely reliable and versatile
- Meets ANSI C136.10

SPECIFICATION - DIMENSIONS IN MM	
Physical	Dimensions: approx. 65.02mm x 36.58mm high (not including wires)
	Designed to meet ANSI C136.10
Nipple	"1/2" - 14NPSL as per ANSI/ASME B1.20.1 (AM-2A and AM-2-A-NB)"
Housing	Aluminium Casting (AM-2-A and AM-2-A-NB)
Bracket	Aluminium
Lead Wires	#14 AWG, rated 105°C

PRODUCT SELECTION INFORMATION										
Description	Range (Volts)	Load Rating Ballast (VA)	Load Rating Ballast (Amps)	Flange Diameter	Receptacle Barrel Diameter	Overall Height	Lead Wire Length	Bracket (inches) Depth	Height	Width
AM-1-A	120 - 480	1800	15.0	2-9/16	1-3/8	1-1/2	9	2.0	3	5-1/2
AM-1-A-NB	120 - 480	1800	15.0	2-9/16	1-3/8	1-1/2	9	-	-	-
AM-2-A	120 - 480	1800	15.0	2-9/16	-	3-1/4	6	2.0	3	5-1/2
AM-2-A-NB	120 - 480	1800	15.0	2-9/16	-	3-1/4	6	-	-	-



AM-1-A Series

Figure A: Side profile

Figure B: Top View

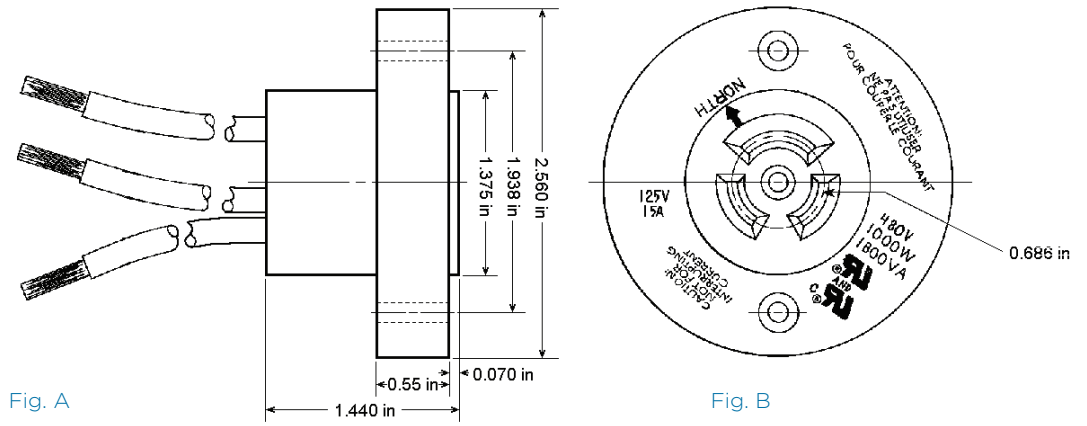


Fig. A

Fig. B

AM-2-A Series

Includes AM-1-A Series Figure above along with the Aluminium lower housing

Figure C: Side profile

Figure D: Top View

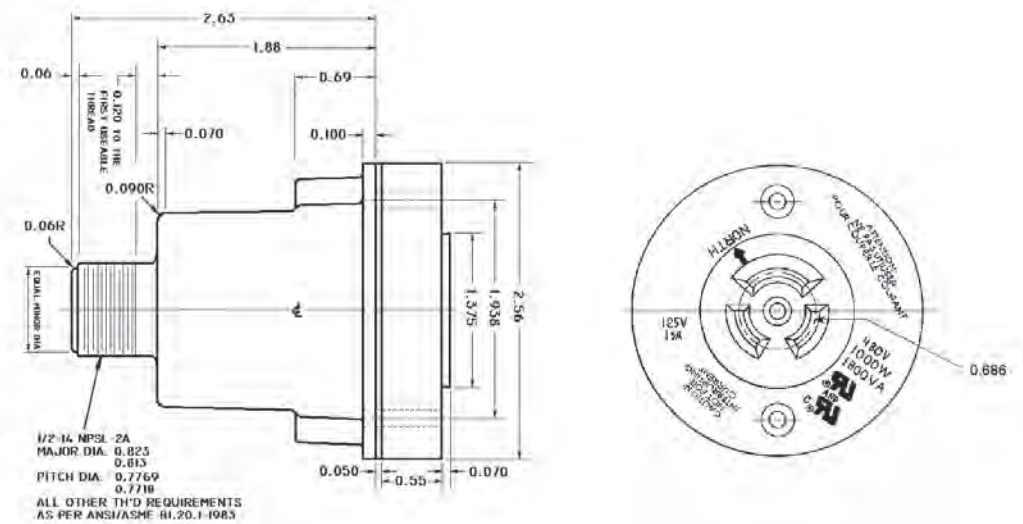
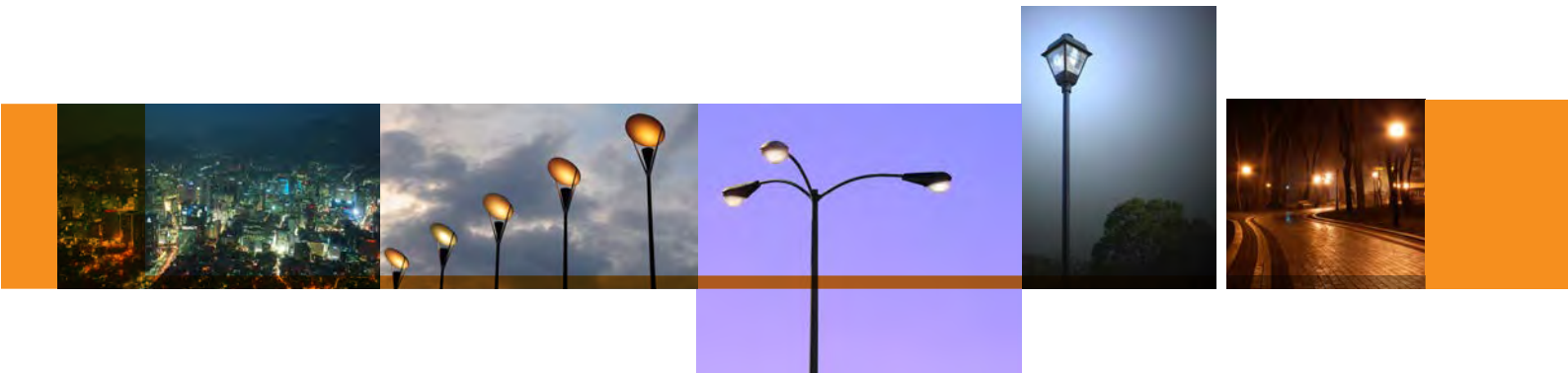


Fig. C

Fig. D



# AA SERIES PHOTOCONTROL

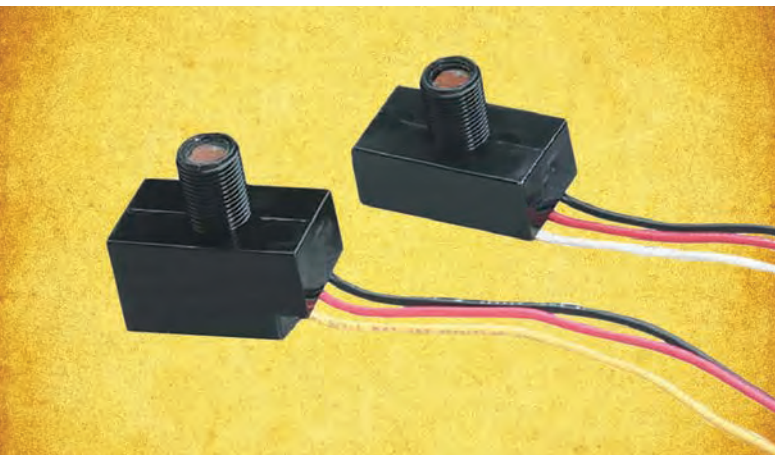
## THERMAL, BUTTON STYLE, WIRE - IN DESIGN

TE Connectivity's (TE) AA Series offers a unique button style design for internal post fixtures or mounting applications. Common uses include decorative light fixtures, post lanterns, wall mount applications, and other commercial and residential uses. TE's innovative design with the wire leads exiting from the rear allow the control to be placed in tight locations while positioning the wiring for easy access.

The AA Series photocontrol is constructed of a high impact UV stabilised polycarbonate housing for superior quality. The 105W and 1068W controls include a brushed aluminium wall plate for installation in standard outlet boxes.

The 105M and 1068M are equipped with a 180 Joule Metal Oxide Varistor (MOV) and are designed to protect luminaries where transient voltage surges are a frequent and recurring problem.

The 105HA is a high ambient temperature photocontrol, designed specifically to last longer in today's hotter running HID luminaries. This unit incorporates insulation and heat sink to absorb the heat generated by the lamp and other components, significantly adding to the control's useful life.



### KEY FEATURES

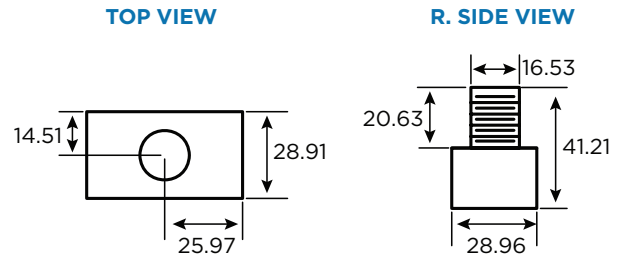
- 3/4in long threaded nipple
- 30 - 45 second time delay
- UL and CSA Listed
- Durable polycarbonate housing
- 1800 and 1200 watt load rating
- Fail mode is ON

### SPECIFICATION - DIMENSIONS IN MM

<b>Physical</b>	Dimensions: approx. 51.94mm dia. x 41.21mm high (Not including wiring)"
	Enclosure: designed to meet ANSI C136.24, UL 773A
	Power consumption: less than 0.9 watts at 120 VAC
<b>Temperature</b>	Minus 40°C to plus 65°C at 96% RH
<b>Control</b>	Thermal State Switch Type
<b>Light Sensor</b>	Cadmium Sulfide Cell

## TECHNICAL INFORMATION

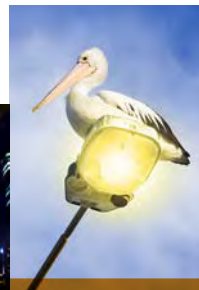
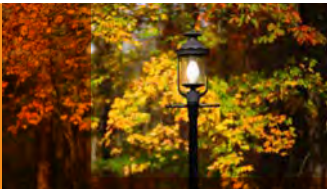
<b>Switch</b>	SPST thermal bi-metallic, exceeds 7,500 ON/OFF operations
<b>Fail Mode</b>	ON (contacts normally closed)
<b>Housing</b>	Polycarbonate with UV stabilised window
<b>Lead Wires</b>	6", #18 AWG, rated 105°C (AA controls) 15", #18 AWG, rated 105°C (AA-M controls) 6", #18 AWG, rated 150°C (AA-HA controls)
<b>Nipple</b>	3/8" pipe
<b>Nut</b>	3/8" pipe, thermoplastic
<b>Light Sensor</b>	1/2" Cadmium sulfide (Cds) cell



Dimensions shown in mm

## PRODUCT SELECTION INFORMATION

Description	Product Information	Rated Volts	Range (Volts)	Load Rating Tungsten (Watts)	Load Rating Ballast (VA)	Surge Protection (Joules)	Turn ON (Fc)	OFF/ON Ratio
<b>AA-105</b>		120	105 - 130	1800	1100		1.5	4 : 1
<b>AA-105W</b>	w/Wall Plate	120	105 - 130	1800	1100		1.5	4 : 1
<b>AA-1068</b>		208/240/277	185 - 305	1200	1100		1.5	4 : 1
<b>AA-1068W</b>	w/Wall Plate	208/240/277	185 - 305	1200	1100		1.5	4 : 1
<b>AA-305</b>		120	105 - 130	300	840		1.5	4 : 1
<b>AA-105M</b>	15" Leads	120	105 - 130	1800	1100	180	1.5	4 : 1
<b>AA-1068M</b>	15" Leads	208/240/277	185 - 305	1200	1100	180	1.5	4 : 1
<b>AA-105HA</b>	High Ambient	120	105 - 130	1800	1100		1.5	4 : 1



TE Connectivity (NYSE: TEL) is a \$12 billion global technology leader. Our connectivity and sensor solutions are essential in today's increasingly connected world. We collaborate with engineers to transform their concepts into creations – redefining what's possible using intelligent, efficient and high-performing TE products and solutions proven in harsh environments. Our 75,000 people, including 7,300 design engineers, partner with customers in close to 150 countries across a wide range of industries. We believe EVERY CONNECTION COUNTS – [www.TE.com](http://www.TE.com).

- Mining
- Nuclear power plants
- OEMs
- Overhead distribution
- Petrochemical plants
- Railways
- Street lighting
- Substations
- Transmission lines
- Underground distribution
- Windfarms
- Solar
- Hydro-electric

WHEREVER ELECTRICITY FLOWS, YOU'LL FIND TE ENERGY



[te.com/energy](http://te.com/energy)

**FOR MORE INFORMATION:**

**TE Customer Support Centers**

NSW/QLD/NT/ACT: +61 (2) 9554 2695  
VIC/TAS/SA: +61 (3) 9271 5243  
WA: +61 (8) 9358 7806  
New Zealand: +64 (9) 634 4580  
Email: [marketingANZ@te.com](mailto:marketingANZ@te.com)

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