

Simply wire in, to be automatic JL-1

The Series of JL-1 is the thermomechanical single-voltage wire-in photocontrol, which is classified according to UL773A standard.

The photocontrols of the series varie in size and shape but basically are wired in red, white and black.

The 120V(B type) is available for all products of the series of JL-1 and the 240V(B type), 208V(C type) and 277V(D type) are also available except JL-101 and JL-102.

The photocontrol is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level. This product is designed on the basis of electrical heating structure that provides time delay to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.

This product was designed with the Standard for Non-industrial Photocontrol for Lighting Control UL773A, as well as CE and RoHS certified.



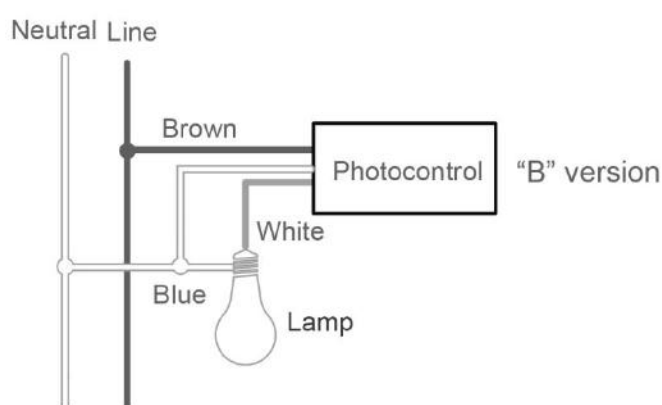
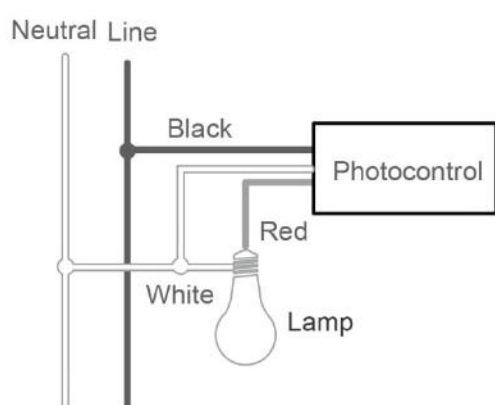
The Family

Model No.	Size	Orientation	Typical	Sensor Type	Sensing
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			Loading *		Shielder
JL-101	Subminiature	—	≤500W	CdS	No
JL-102	Miniature	—	≤500W	CdS	No
JL-103	Standard	—	≤1000W	CdS/Phototransistor	No
JL-104	Standard	⊙ Δ	≤1000W	CdS/ Phototransistor	No
JL-106	Bigger	⊙	≤1000W	CdS/ Phototransistor	Yes
JL-106V	Bigger	⊙ Δ	≤1000W	CdS/ Phototransistor	Yes
JL-116A	Bigger	⊙	≤1000W	CdS/ Phototransistor	Yes
JL-116AV	Bigger	⊙ Δ	≤1000W	CdS/ Phototransistor	Yes
JL-118	Bigger	⊙	≤1000W	CdS	Yes
JL-118V	Bigger	⊙ Δ	≤1000W	CdS	Yes
JL-126	Bigger	⊙	≤3000W	CdS/ Phototransistor	Yes

* For details, please refer to the following pages

Wiring Diagram



Trouble Shooting

- It is recommended to be installed by a licensed electrician. The installation and use of the equipment should be in accordance with the US National Electrical Code, local regulations and relevant industry standards.
- Check that the line voltage is consistent with the one shown on the photo control label. To avoid fire, conflict, or death, turn off the power and route the circuit breaker or panel and test power off.
- Do not face the sensing eye to an artificial light source such as window, pilot sign, street lighting etc, to avoid its malfunction. Especially, it may be cycled when seeing the light it controls.

JL-101

Direct Wire-in Thermal Photocontrol (Sub-miniature)



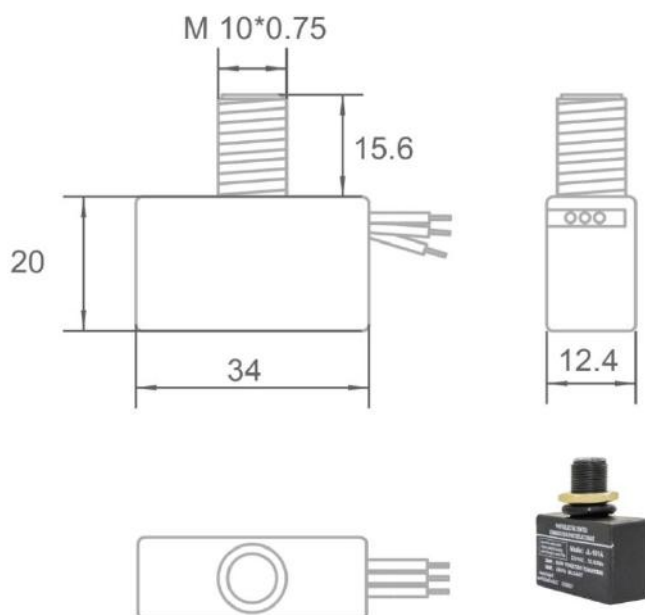
Product Summary

The photocontrol JL-101 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is complied with the Standard for Non-industrial photocontrol for Lighting Control UL773A.

Features

- Time Delay 20~120s
- Ambient Temperature: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- PET enclosure (UL94 V-0)
- Copper alloy lock nut



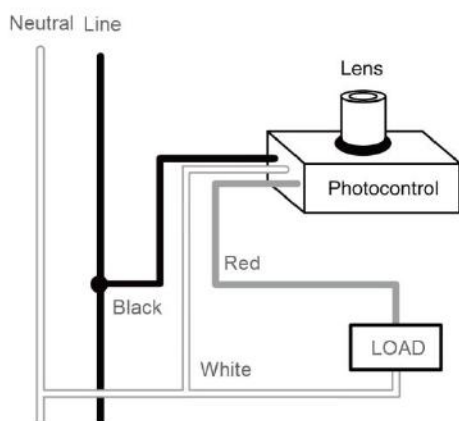
Specifications

Model No.	JL-101A
Rated Voltage	120VAC
Rated Frequency	50/60Hz
Rated Loading	600W Tungsten, 480VA Ballast, 2A e-Ballast
Power Consumption	1.5W Max.
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off
Ambient Temperature	-20°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-On
Lead Wire	AWG#18, AWM1332
Rainproof Cap	Optional
Certifications	  

Installation

Disconnect power, remove junction box cover, place the SWITCH in knockout hole and fasten with lock-nut.

Wire according to the diagram :



Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-101A 09 BC

	1	2
JL-101A	09	BC

1: Lead Length

Wire length in 9"

04 = 4 inches (100 mm)

Customizable

2: BC=Block Cap (black) offered

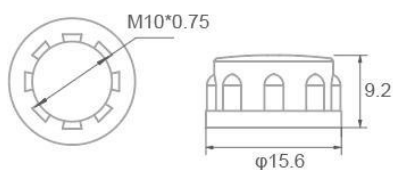
CC=Waterproof Cap (clear) offered

Null=Standard

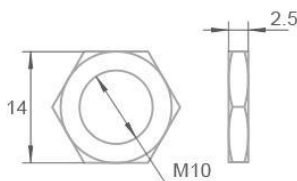
*Default configuration:

Lock-nut x1, Rubber gasket x1, Holographic label x1

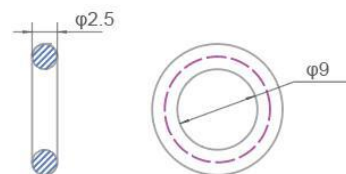
Accessory



Rainproof Cap / Blackout cap



Lock-nut



Gasket

JL-102

Direct Wire-in Thermal Photocontrol(Miniature)

JL-102A



JL-102AR



Product Summary

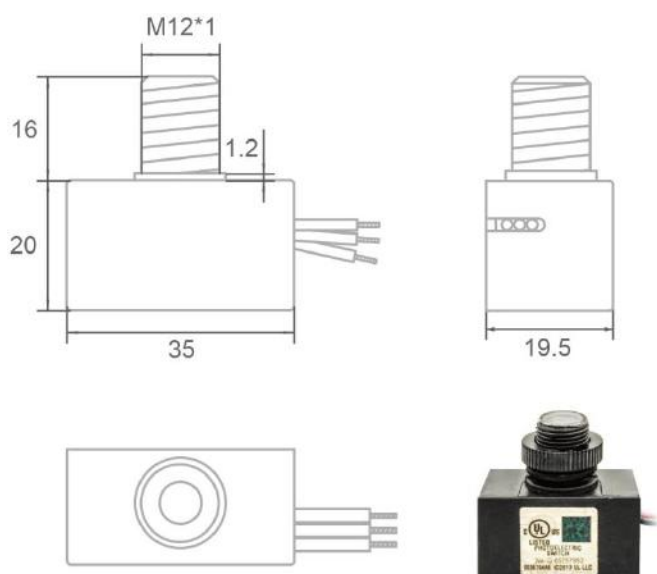
The photocontrol JL-102 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is complied with the Standard for Non-industrial photocontrol for Lighting Control UL773A.

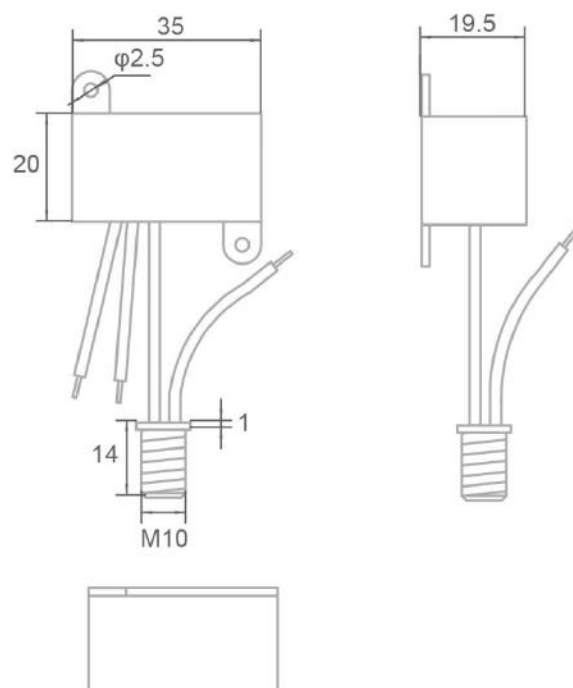
Features

- Time Delay 20~120s
- Ambient Temperature: -20°C ~ +70°C
- PET enclosure (UL94 V-0)
- Sensor Separated for flexible allocations inside fixture (JL-102AR only)

JL-102A



JL-102AR



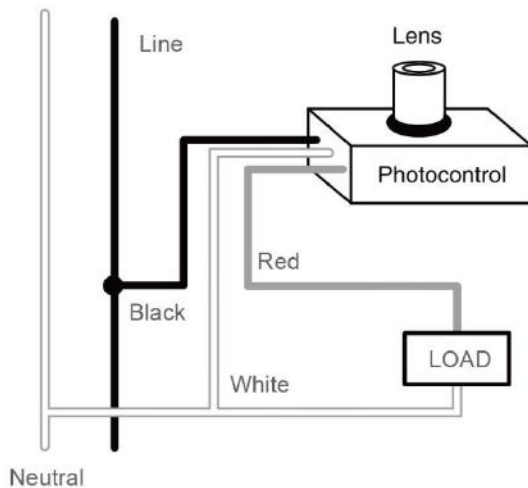
Specifications

Model No.	JL-102A / JL-102AR
Rated Voltage	120VAC
Rated Frequency	50/60Hz
Rated Loading	600W Tungsten, 480VA Ballast, 2A e-Ballast
Power Consumption	1.5W Max.
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off
Ambient Temperature	-20°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-On
Lead Wire	AWG#18, AWM1332
Rainproof Cap	Optional
Certifications	  

Installation

Disconnect power, remove junction box cover, place the SWITCH in knockout hole and fasten with lock-nut.

Wire according to the diagram :



Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with a block cap or similar cover.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch ON.
- Test will take approximately 2 minutes.

* JL-102R now available

- Separated sensor unit (leads 8" extended from control unit)
- Smaller mounting hole (10mm dia. only) required

Ordering Information

JL-102A R 09 BC

	1	2	3
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JL-102A	R	09	BC
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1: Option= (External probe)

2: Lead Length

Wire length in 9"

04 = 4 inches (100 mm)

Customizable

3: BC=Block Cap (black) offered

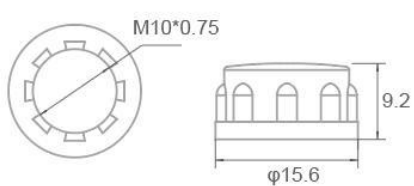
CC=Waterproof Cap (clear) offered

Null=Standard

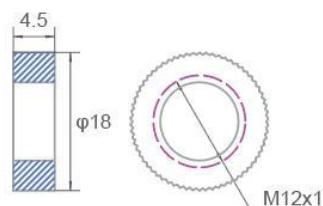
*Default configuration:

Lock-nut x1, Rubber gasket x1, Holographic label x1, AWG#18 wire x6"

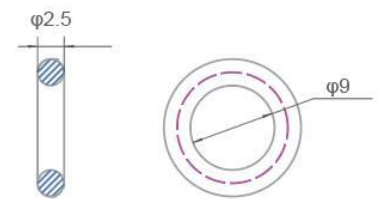
Accessory



Rainproof Cap / Blackout cap



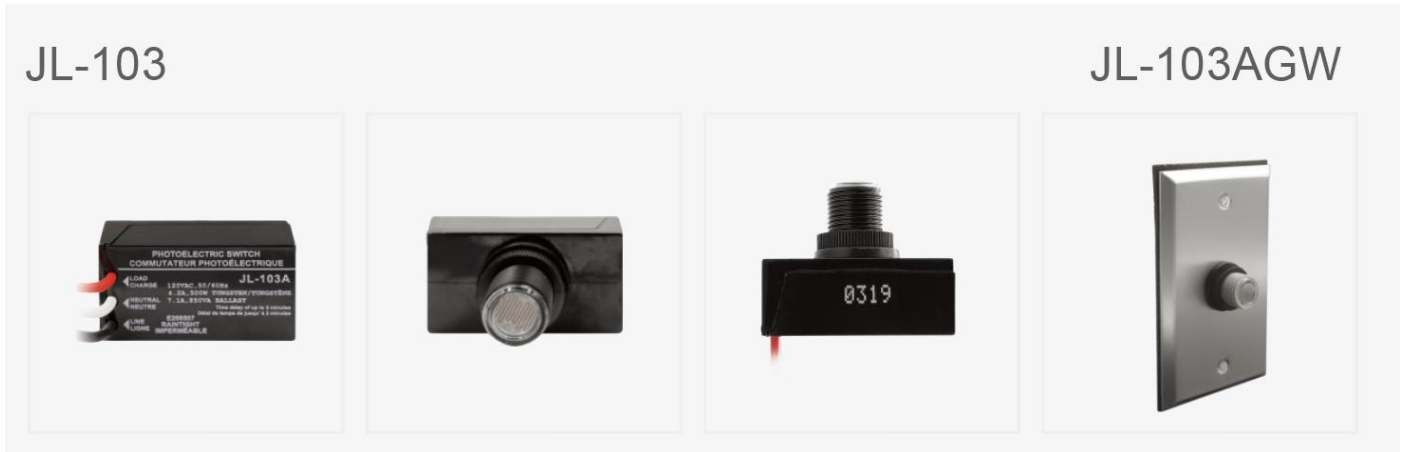
Lock-nut



Gasket

JL-103

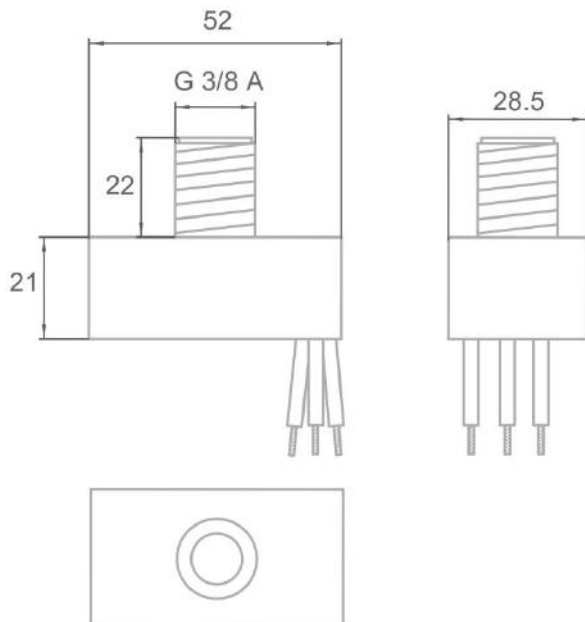
Direct Wire-in Thermal Photocontrol (Traditional Button Type)



Product Summary

The photocontrol JL-103 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photocontrols for Lighting Control UL773A.



Features

- Time Delay 20~120 seconds

- Ambient Temperature: -40°C ~ +70°C
- UV stabilized PC enclosure

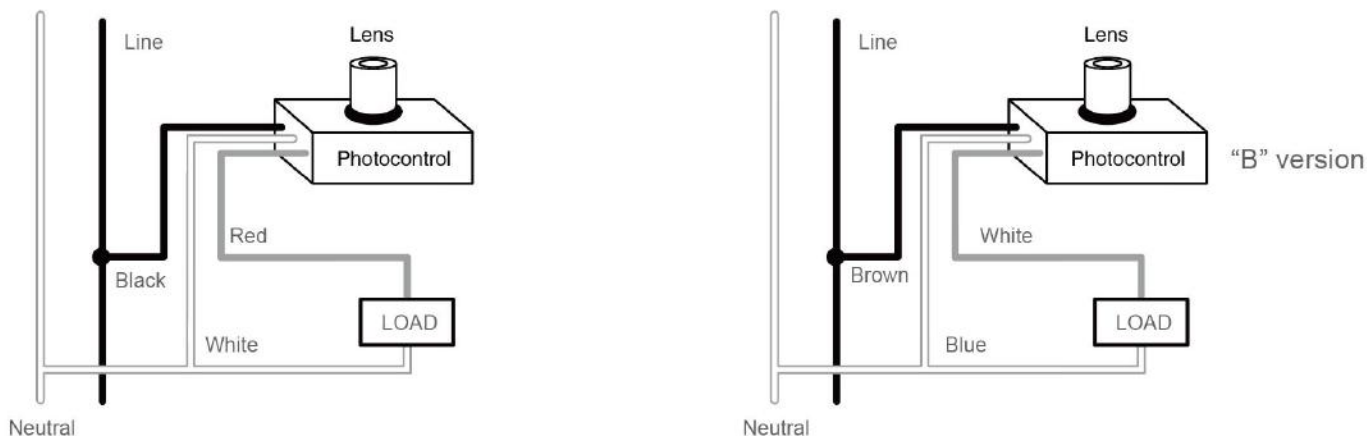
Specifications

Model No.	JL-103A	JL-103B	JL-103C	JL-103D	JL-103EE	JL-103FE
Rated Voltage	120VAC	220~240VAC	208~277VAC	277VAC	347VAC	480VAC
Applicable Voltage Range	—		200~305VAC	—		
Rated Frequency	50/60Hz					
Wire Length	4"min					
Wiring Material	AWG#18, AWM1015	AWG#18, AWM1015	AWG#16, AWM3321	AWG#18, AWM1015	AWG#16, AWM3321	AWG#16, AWM3321
Rated Loading	500W 850VA	500W 850VA	1500W 1500VA	500W 850VA	2000W 2000VA	2000W 2000VA
Power Consumption	1.5W Max.					
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off					
Ambient Temperature	-40°C ~ +70°C					
Related Humidity	96%					
Fail Mode	Fail-On					
Rainproof Cap	Optional					
Certifications						—

Installation

Disconnect power, remove junction box cover, place the SWITCH in knockout hole and fasten with lock-nut.

Wire according to the diagram :



Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-103A 18 06 P L M N W BC F 25

	1	2	3	4	5	6	7	8	9	10	11
JL-103	A	18	06	P	L	M	N	W	BC	F	25

- 1: A=120VAC
 B=120~240VAC
 C=208~277VAC
 D=277VAC

EE =347VAC

FE =480VAC

2: Lead Rating

18=18 AWG, 105°C rated, for models with rating of 500 W use only

16G=16 AWG, 150°C rated

3: Lead Length

06 = 6"

Customizable, 4"min

4: P = Wire outlet on the smallest wall

Null = Wire outlet on the largest wall

5: L = Double nut

null= single nut

6: M(option) =UL holographic label

7: N = single flat rubber gasket

NN = double flat rubber gasket

O = double O-ring

NULL = rubber sponge gasket

8: W(option)= aluminum panel

9: optional cap

BC = black shading cap

CC= transparent rain cap

Null = none

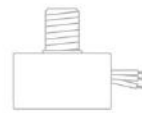
10: (option)

F = European wiring color code with RoHS mark (UKCA)

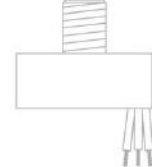
11: (option)

25mm long screw

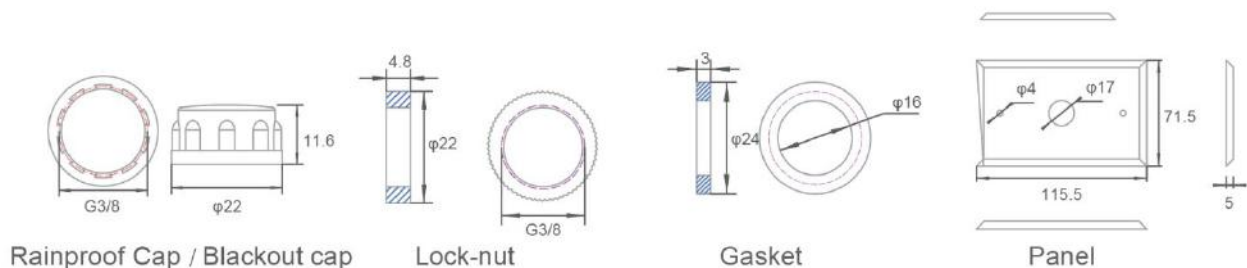
Flat outgoing line



Straight outgoing line

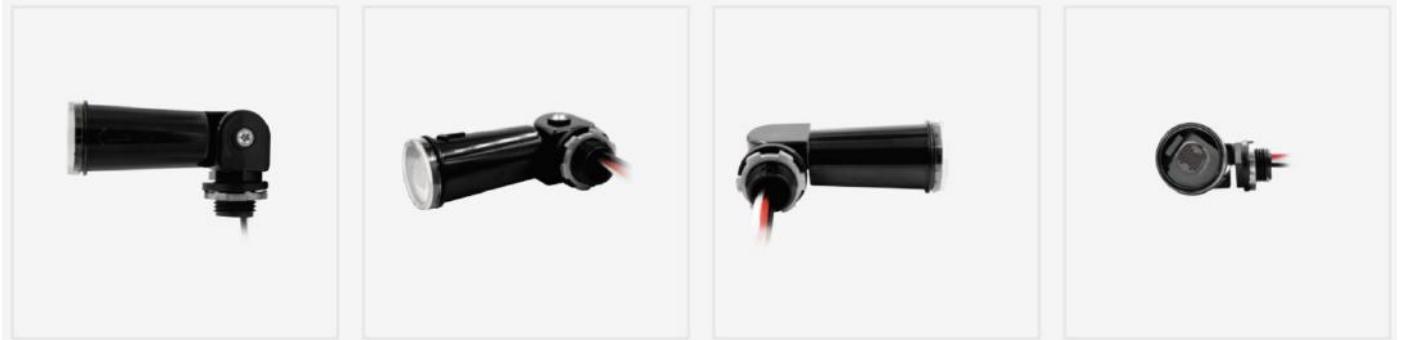


Accessory



JL-104

Direct Thermal Photocontrol(Swivel integrated)



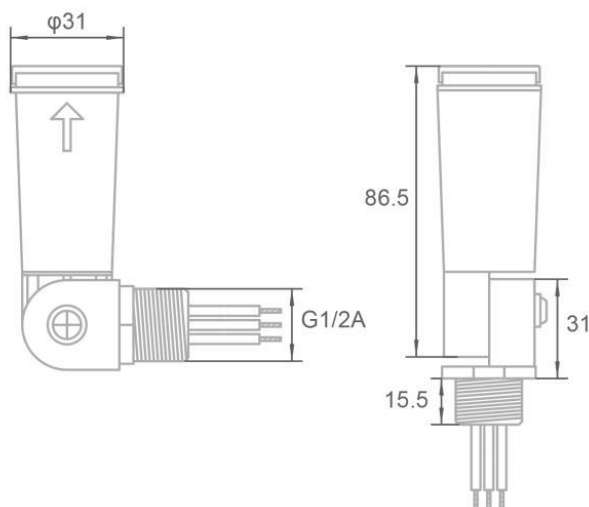
Product Summary

The Photocontrol JL-104 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed on the basis of electrical heating structure that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.

JL-104 has a gathered swivel with the sensor/switch body for convenient direction adjustment after installation.

This product is certified to the Standard for Non-industrial Photocontrol for Lighting Control UL773A and applicable Canadian Standards.



Features

- Time Delay 20~120s
- Ambient Temperature: -40°C ~ +70°C
- Swivel integrated
- Screw Thread (NPT 1/2") & Zinc Alloy Nut
- UV stabilized PC enclosure

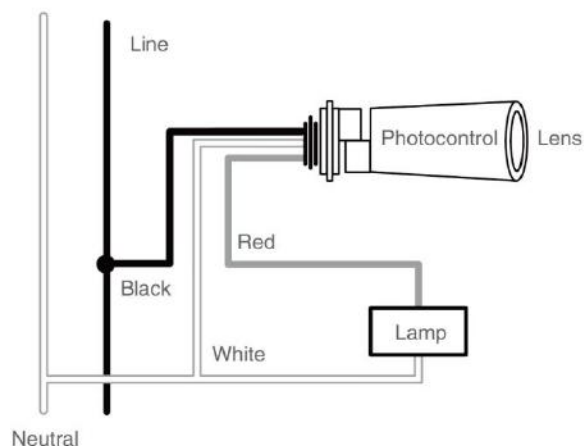
Specifications

Model No.	JL-104A	JL-104B	JL-104C	JL-104D	JL-104EE
Rated Voltage	120VAC	220~240VAC	208~277VAC	277VAC	347VAC
Applicable Voltage Range	—		200~305VAC	—	
Rated Frequency	50/60Hz				
Rated Loading	1800W Tungsten,1100VA Ballast				2000W Tungsten, 2000VA Ballast
Power Consumption	1.5W Max.				
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off				
Ambient Temperature	-40°C ~ +70°C				
Related Humidity	96%				
Fail Mode	Fail-On				
Lead Wire	AWG#16,AWM3321 4"min				
Certifications					

Installation

Disconnect power, place screw thread of the SWITCH in knockout hole and fasten with rubber gasket and Zinc alloy lock-nut.

Wire according to the diagram :



Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-104A 16 06 L H M

	1	2	3	4	5	6
JL-104	A	16	06	L	H	M

1: A=120VAC

B=220~240VAC

C=208~277VAC

D=277VAC

EE=347VAC

2: Lead Rating

16=16 AWG, 150°C rated

3: Lead Length

06 = 6"

Customizable, 4"min

4: L = Common Zinc nut

Q = Notched Zinc nut

5: H = Black

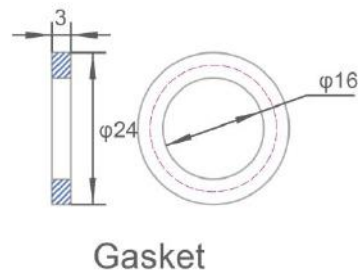
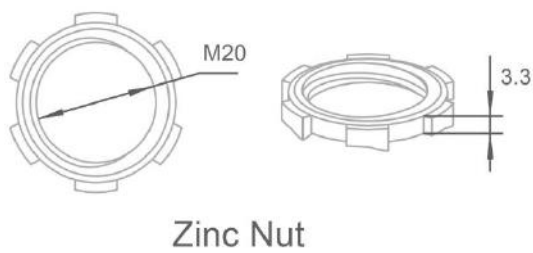
K1 = Light gray

K2 = Dark gray

6: M (option) = UL holographic label

*Default configuration: Zinc nut x1, rubber gasket x1

Assemblies



JL-106

Direct Wire-in Thermal Photocontrol

JL-106



"v"version



Product Summary

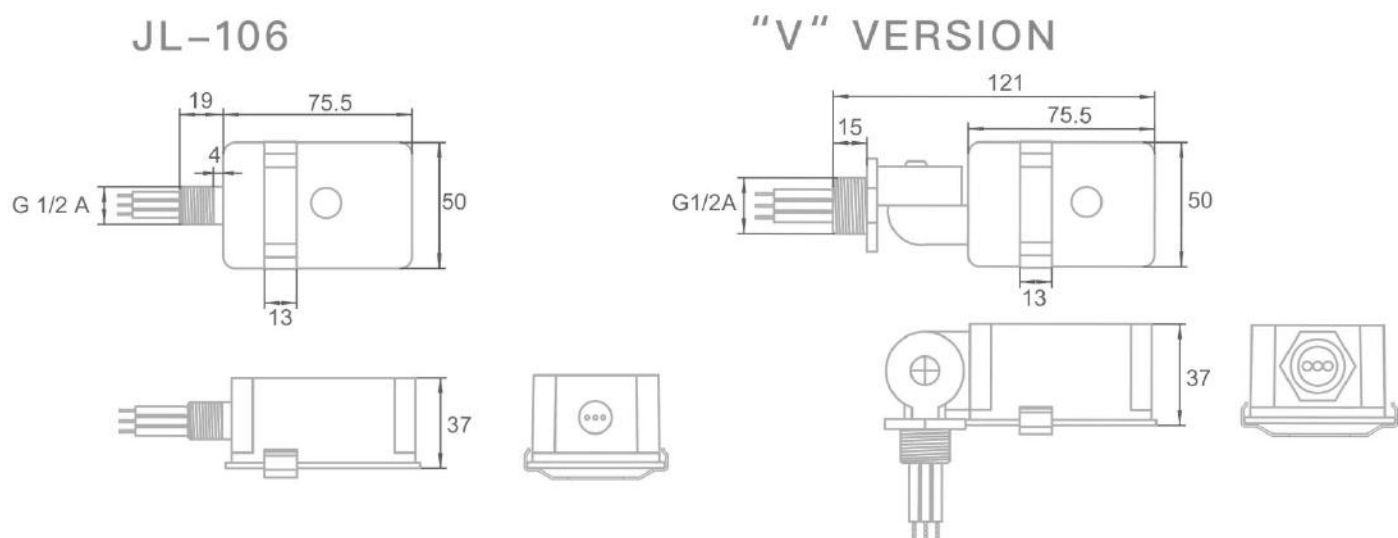
The photocontrol JL-106 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

It is designed on the basis of electrical heating structure that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.

Its swivel version is convenient for direction adjustment after installation.

Features

- Time Delay 30~120 seconds
- Ambient Temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Screw Thread (NPT 1/2") & Zinc Alloy Nut
- UV stabilized PC enclosure



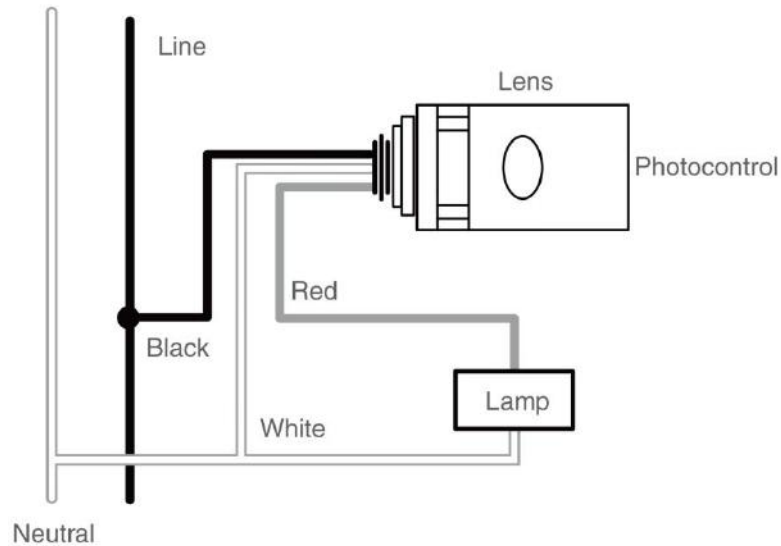
Specifications

Model No.	JL-106A (*V)	JL-106B (*V)	JL-106C (*V)	JL-106D (*V)
Rated Voltage	120VAC	220~240VAC	208~277VAC	277VAC
Applicable Voltage Range	—		200~305VAC	—
Rated Frequency	50/60Hz			
Rated Loading	2000W Tungsten, 2000VA Ballast			
Power Consumption	1.5W Max.			
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off			
Ambient Temperature	-40°C ~ +70°C			
Related Humidity	96%			
Fail Mode	Fail-On			
Lead Wire	AWG#16, AWM3321 4" min			
Certifications	  			

Installation

Disconnect power, place screw thread of the SWITCH in knockout hole and fasten with rubber gasket and Zinc alloy lock-nut.

Wire according to the diagram :



Slide the shading strip to have preferred On/Off levels, if necessary.

Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with sliding the shading strip.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

Ordering Information

JL-106A 16 06 M CA20

	1	2	3	4	5	6
JL-106	A	<u>V</u>	16	06	M	CA20

1: A=120VAC

B=220~240VAC

C=208~277VAC

D=277VAC

2: V(option) =swivel added

3: Lead Rating

16=16 AWG, 150°C rated

4: Lead Length

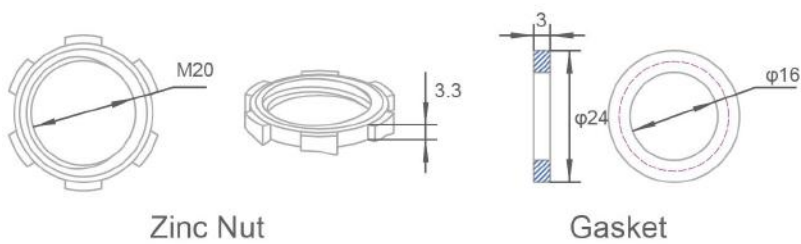
06 = 6"

Customizable, 4"min

5: M (option) = UL holographic label

6: CA20(option) = California Title 20

Assemblies



JL-116

Direct Wire-in Thermal Photocontrol(Aluminum Die-cast Enclosure)

JL-116



"v"version



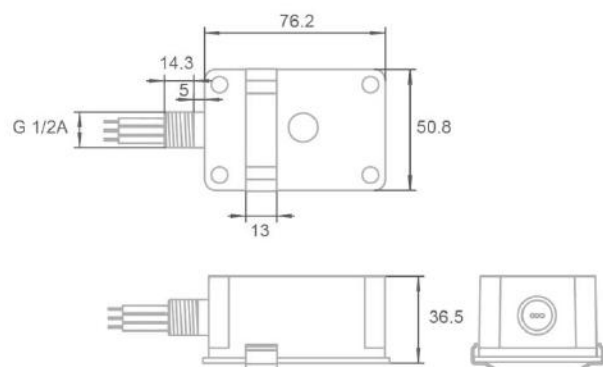
Product Summary

The photocontrol JL-116 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

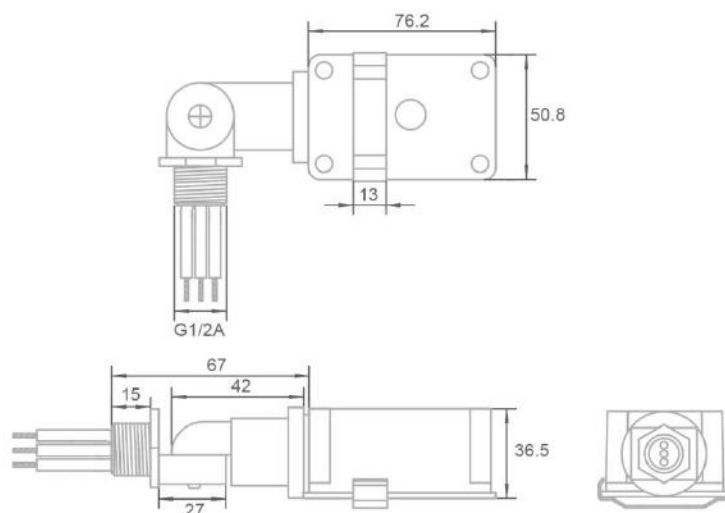
It is designed on the basis of electrical heating structure that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.

It is convenient for direction adjustment after installation once an additional swivel is applied.

JL-116



"V" VERSION



Features

- Time Delay 30~120s
- Ambient Temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Additional Swivel Available
- Screw Thread (NPT 1/2") & Zinc Alloy Nut
- Aluminum Die-cast Enclosure
- Heavy Duty up to 2000VA

Specifications

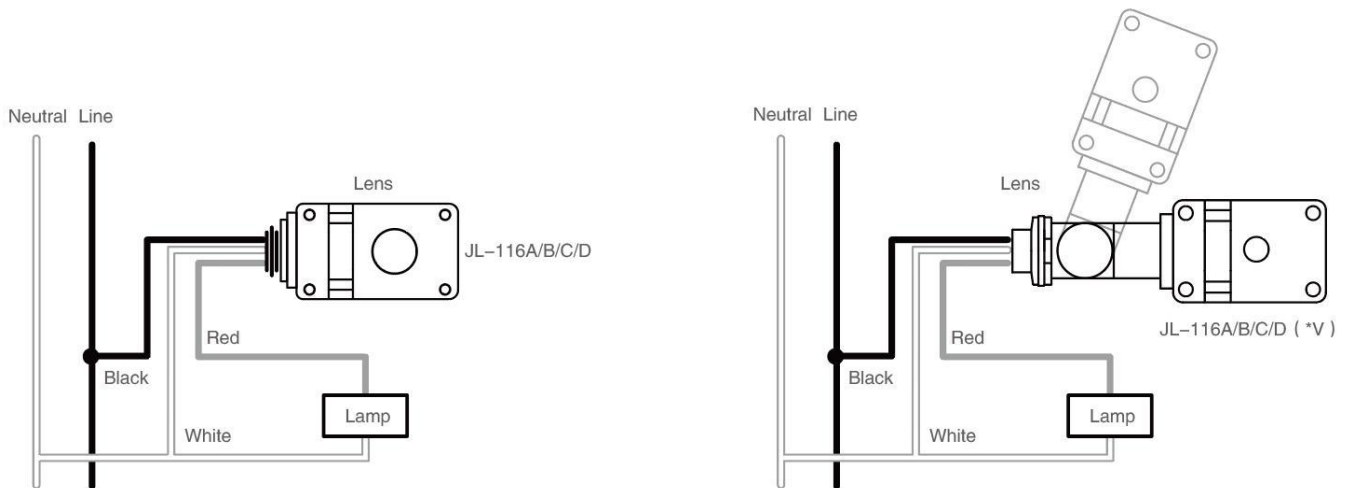
Model No.	JL-116A (*V)	JL-116B (*V)	JL-116C (*V)	JL-116D (*V)
Rated Voltage	120VAC	220~240VAC	208~277VAC	277VAC
Applicable Voltage Range	—		200~305VAC	—
Rated Frequency	50/60Hz			
Rated Loading	2000W Tungsten, 2000VA Ballast			
Power Consumption	1.5W Max.			
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off			

Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-On
Lead Wire	AWG#16,AWM3321 4"min
Certifications	  

Installation

Disconnect power, place screw thread of the SWITCH in knockout hole and fasten with rubber gasket and Zinc alloy lock-nut.

Wire according to the diagram:



Slide the shading strip to have preferred On/Off levels, if necessary.

Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with sliding the shading strip.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

Ordering Information

JL-116A 16 06 V M -CA20

	1	2	3	4	5	6
JL-116	A	16	06	V	M	CA20

1: A=120VAC

B=220~240VAC

C=208~277VAC

D=277VAC

2: Lead Rating

16=16 AWG, 150°C rated

3: Lead Length

06 = 6"

Customizable, 4"min

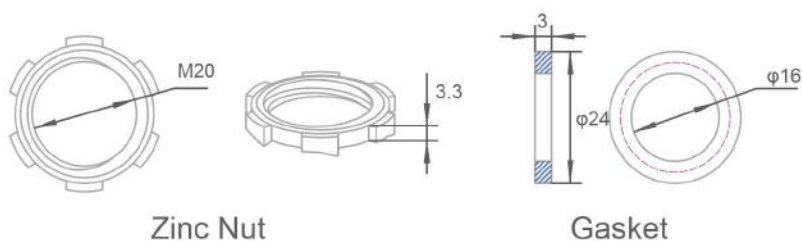
4: V(option) =swivel added

5: M (option) = UL holographic label

6: CA20(option) = California Title 20

*Default configuration: Zinc nut x1, rubber gasket x1

Assemblies



JL-118A

Direct Wire-In Thermal photocontrol



"V" VERSION



Product Summary

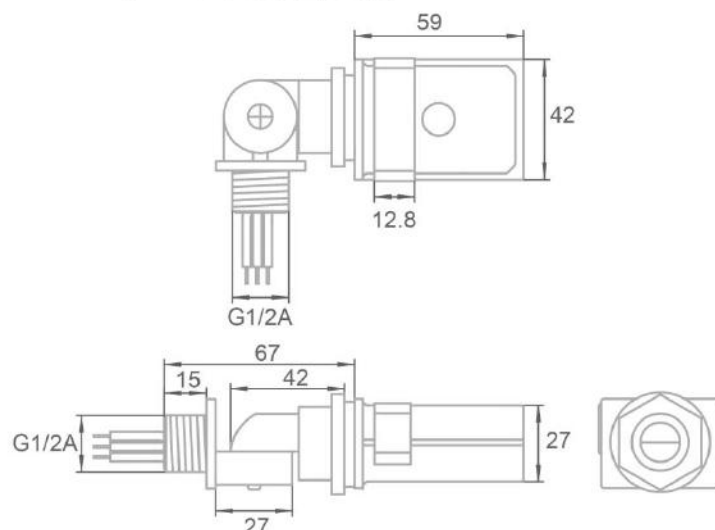
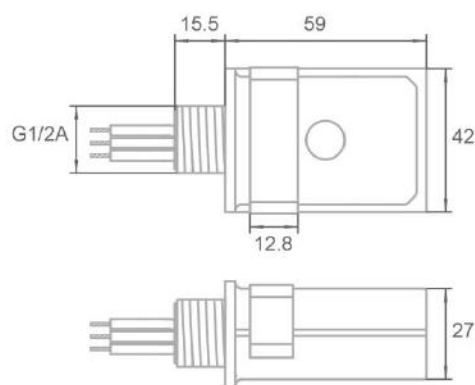
The photoelectric switch JL-118 series is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed on the basis of electrical heating structure that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.

Its swivel version is easy to adjust the direction after installation.

JL-118

"V" VERSION



Features

- Time Delay 30~120s
- Ambient Temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Swivel optional
- Screw Thread(NPT 1/2") & Zinc Alloy Nut
- UV stabilized PC enclosure

Specifications

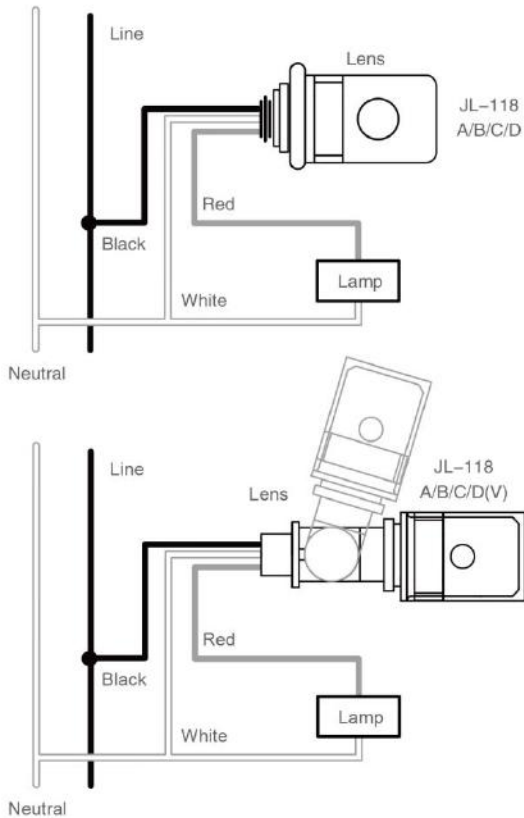
Model No.	JL-118A (V)	JL-118B (V)	JL-118C (V)	JL-118D (V)
Rated Voltage	120VAC	220~240VAC	208~277VAC	277VAC
Applicable Voltage Range	—		200~305VAC	—
Rated Frequency	50/60Hz			
Rated Loading	1800W Tungsten, 1100VA Ballast			
Power Consumption	1.5W Max.			
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off			
Ambient Temperature	$-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$			

Related Humidity	96%
Fail Mode	Fail-On
Lead Wire	AWG#16,AWM3321 4"min
Certifications	  

Installation

Disconnect power, place screw thread of the SWITCH in knockout hole and fasten with rubber gasket and Zinc alloy lock-nut.

Wire according to the diagram:



Slide the shading strip to have preferred On/Off levels, if necessary.

Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with sliding the shading strip.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

Ordering Information

JL-118A 16 06 V M-CA20

	1	2	3	4	5	6
JL-118	A	16	06	V	M	CA20

1: A=120VAC

B=220~240VAC

C=208~277VAC

D=277VAC

2: Lead Rating

16=16 AWG, 150°C rated

3: Lead Length

06 = 6"

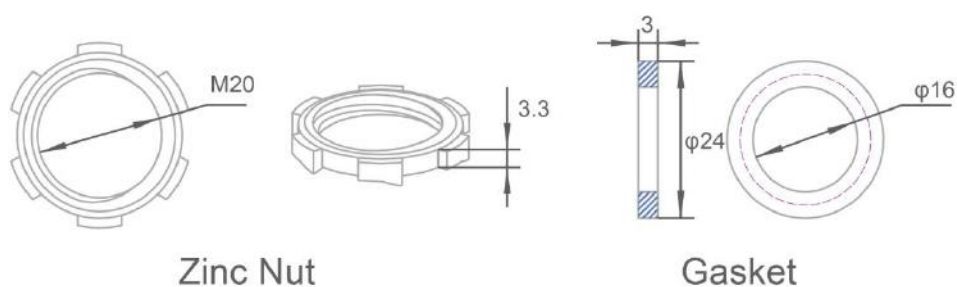
Customizable, 4"min

4: V(option) =swivel added

5: M (option) = UL holographic label

6: CA20(option) = California Title 20

Assemblies



JL-126

Direct Wire-in Thermal Photocontrol(Aluminum Die-cast Enclosure heavy duty)

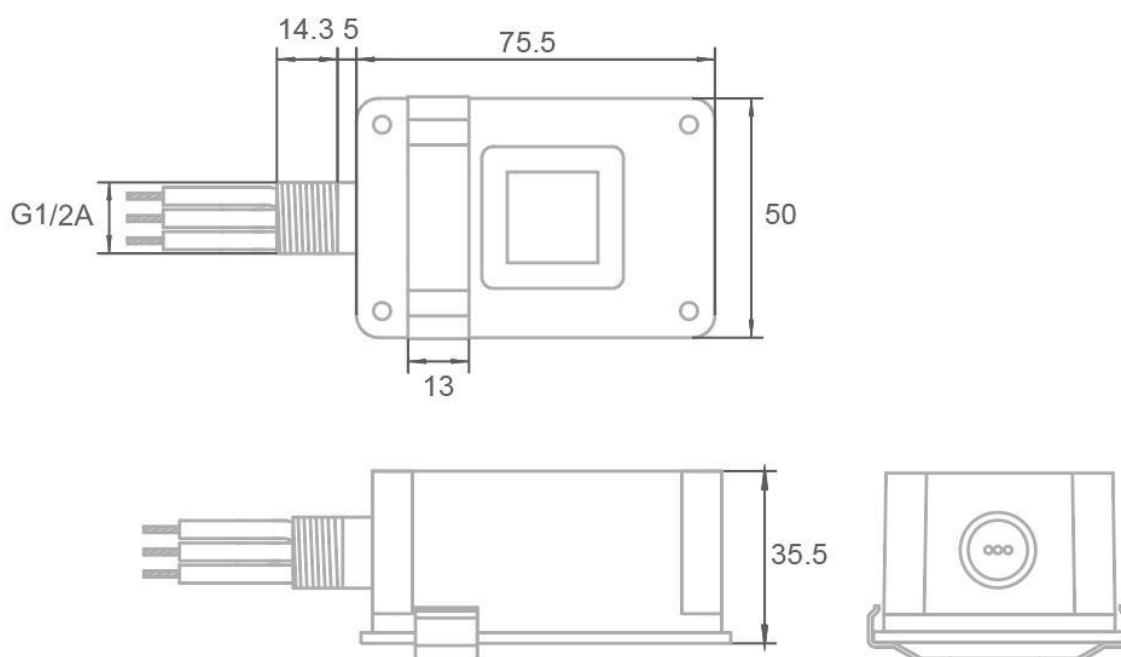


Product Summary

The photocontrol JL-126 is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

It is designed on the basis of electrical heating structure that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.

It is convenient for direction adjustment after installation once an additional swivel is applied.



Features

- Time Delay 30~120s
- Ambient Temperature: -40°C ~ +70°C
- Additional Swivel Available
- Screw Thread (NPT 1/2") & Zinc Alloy Nut
- Aluminum Die-cast Enclosure
- Heavy Duty up to 3000VA

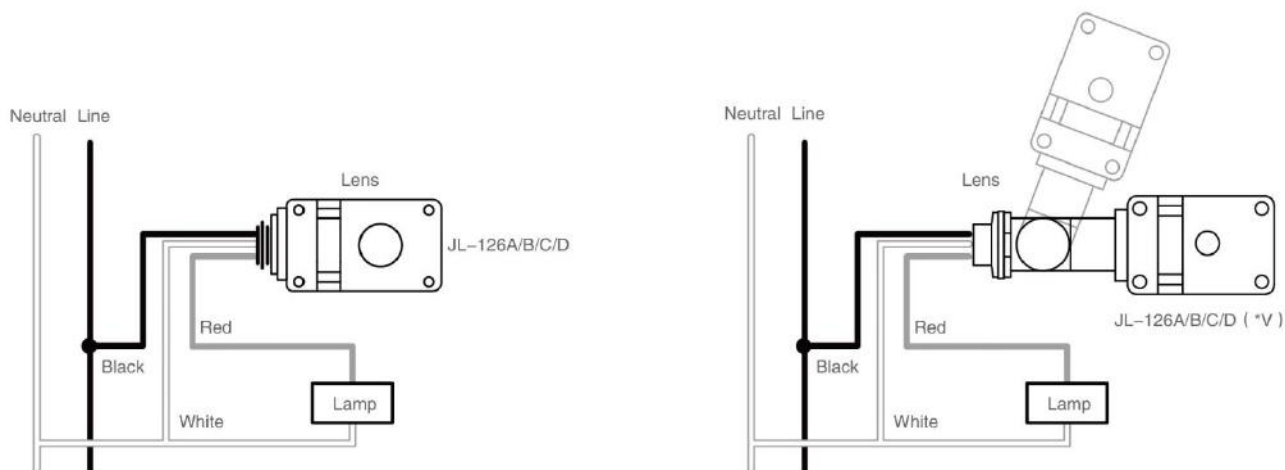
Specifications

Model No.	JL-126A	JL-126B	JL-126D
Rated Voltage	120VAC	220~240VAC	277VAC
Rated Frequency	50/60Hz		
Rated Loading	3000W Tungsten,2000VA Ballast		3000W Tungsten,3000VA Ballast
Power Consumption	1.5W Max.		
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off		
Ambient Temperature	-40°C ~ +70°C		
Related Humidity	96%		
Fail Mode	Fail-On		
Lead Wire	N: AWG#18 AWM1015; Li/L0: AWG#10 AWM1015 6" min		
Certifications	  		

Installation

Disconnect power, place screw thread of the SWITCH in knockout hole and fasten with rubber gasket and Zinc alloy lock-nut.

Wire according to the diagram:



Slide the shading strip to have preferred On/Off levels, if necessary.

Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.

Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test "turn on" during daytime, cover its eye with sliding the shading strip.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

Ordering Information

JL-126 A 16 06 V -CA20

	1	2	3	4	5
JL-126	A	10	06	V	CA20

1: A=120VAC

B=220~240VAC

D=277VAC

2: Lead Rating

10= 10 AWG, 105°C rated

3: Lead Length

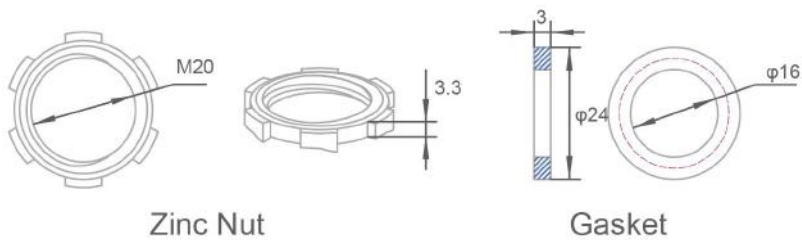
06 = 6"

Customizable, 4"min

4: V(option) =swivel added

5: CA20(option) = California Title 20

Assemblies

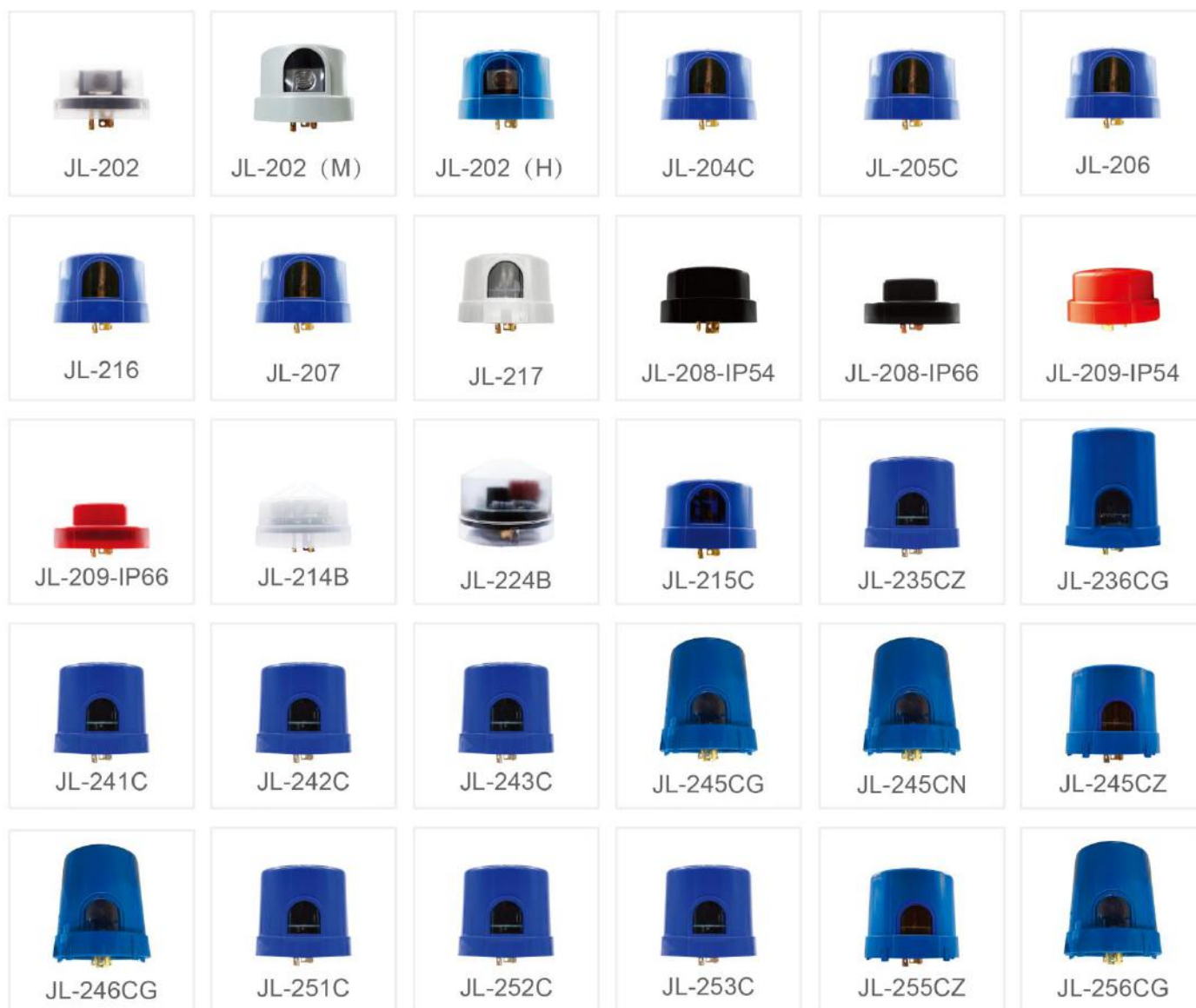


JL-2 Twist it on, to be automatic or intelligent

The Series of JL-2, conforms ANSI C136.10 and/or ANSI.C136.41, is verified according to ANSI/UL773 standard, which includes the thermomechanical single-voltage twist-lock photocontrol, the multi-volts Analog Electronic, Digital Electronic and Smart twist-lock photocontrol.

The photocontrols of the series are all cylindrical in shape, with the transparent photosensitive lens and 3 twist-lock brass plugs (or plus 4 gold-plated contacts) The thermomechanical photocontrol JL-202 series meets the mains voltage with various submodels while the other electronic photocontrols meet 110~277V (even more 110~480V)

the Series of JL-2



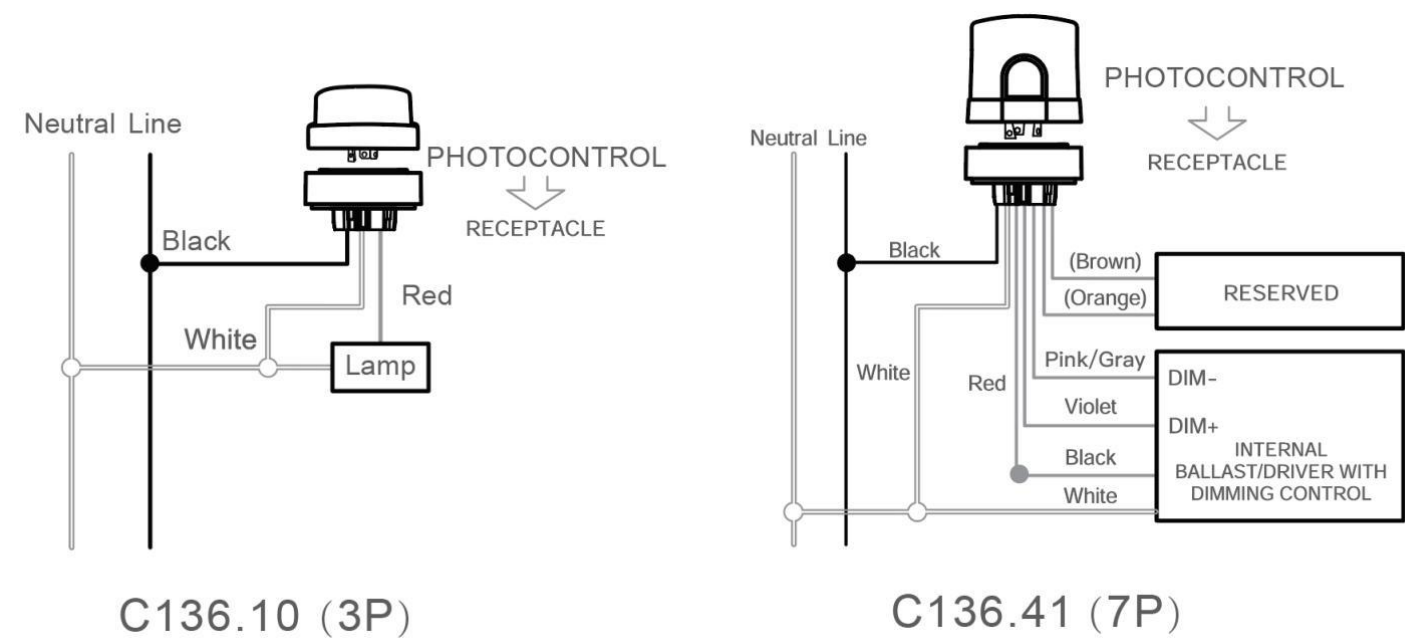
The Family

Model No.	Voltage	Typical Loading	Photosensitive Element	Parameter Factory Setting	IP Grade	ANSI
JL-202	Single voltage	$\leq$ 1800W	CdS Photocell	—	IP54	ANSI C136.10
JL-202(M)	Single voltage	$\leq$ 1800W	CdS Photocell	—	IP54	ANSI C136.10
JL-202(H)	Single voltage	$\leq$ 1800W	CdS Photocell	—	IP54	ANSI C136.10
JL-204C	Multi-volts	$\leq$ 1000W	Phototransistor	—	IP54/65/67	ANSI C136.10
JL-205C	Multi-volts	$\leq$ 1000W	Phototransistor	—	IP54/65/67	ANSI C136.10
JL-206	Multi-volts	$\leq$ 1000W	IR-filtered Phototransistor	Customizable	IP54/65/67	ANSI C136.10
JL-216	Multi-volts	$\leq$ 1000W	IR-filtered Phototransistor	Customizable	IP54/65/67	ANSI C136.10
JL-207	Multi-volts	$\leq$ 1000W	IR-filtered Phototransistor	Customizable	IP54/65/67	ANSI C136.10
JL-217	Multi-volts	$\leq$ 1000W	IR-filtered Phototransistor	Customizable	IP54/65/67	ANSI C136.10
JL-208-IP54	Shorting cap 0-480VAC	$\leq$ 7200W	—	—	IP54/65	ANSI C136.10 ANSI C136.41
JL-208-IP66	Shorting cap 0-480VAC	$\leq$ 7200W	—	—	IP66	ANSI C136.10 ANSI C136.41
JL-209-IP54	Open cap 0-480VAC	—	—	—	IP54/65	ANSI C136.10 ANSI C136.41

JL-209-IP66	Open cap 0-480VAC	—	—	—	IP66	ANSI C136.10 ANSI C136.41
JL-214B	Multi-volts	$\leq$ 1000W	Phototransistor	—	IP54	ANSI C136.10
JL-224B	Multi-volts	$\leq$ 1000W	Phototransistor	—	IP54	ANSI C136.10
JL-215C	Multi-volts	$\leq$ 1000W	Phototransistor	—	IP54/65/67	ANSI C136.10
JL-235CZ	Multi-volts	$\leq$ 1000W		—	IP65/67	ANSI C136.10
JL-236CG	Multi-volts	$\leq$ 1000W		—	IP65/67	ANSI C136.10
JL-241C	Multi-volts 0~10V	$\leq$ 1000W		Remote Manage	IP65/67	ANSI C136.41
JL-242C	Multi-volts 0~10V	$\leq$ 1000W		Remote Manage	IP65/67	ANSI C136.41
JL-243C	Multi-volts 0~10V	$\leq$ 1000W	Phototransistor	Remote Manage	IP65/67	ANSI C136.41
JL-245CG	Multi-volts 0~10V	$\leq$ 1000W		Remote control + adaptive mode	IP67	ANSI C136.41
JL-245CN	Multi-volts 0~10V	$\leq$ 1000W		Remote control + adaptive mode	IP67	ANSI C136.41
JL-245CZ	Multi-volts 0~10V	$\leq$ 1000W		Remote control + adaptive mode	IP67	ANSI C136.41
JL-246CG	Multi-volts 0~10V	$\leq$ 1000W		Remote control + adaptive mode	IP54/65/67	ANSI C136.41

JL-246CR	Multi-volts 0~10V	≤ 1000W		Remote control + adaptive mode	IP65/67	ANSI C136.41
JL-251C	Multi-volts Dail	≤ 1000W		Remote Manage	IP67	ANSI C136.41
JL-252C	Multi-volts Dail	≤ 1000W		Remote Manage	IP67	ANSI C136.41
JL-253C	Multi-volts Dail	≤ 1000W		Remote Manage	IP67	ANSI C136.41

Wiring Diagram



Applications

The photocontrol switch is applicable to control the street lighting and passage lighting automatically in accordance with the ambient lighting level.

Trouble Shooting

- It is recommended to be installed by a licensed electrician. The [Installation](#) and use of the equipment should be in accordance with the US National Electrical Code, local regulations and relevant industry standards.
- Check that the line voltage is consistent with the one shown on the photo control label. To avoid fire, conflict, or death, turn off the power and route the circuit breaker or panel and test power off.
- Do not face artificial light directly if installed on the south side of the building, facing east or west or pointing down to the ground, such as from windows, signs, street lights, and light that may turn on. Do not place the photo control unit under the light (or reflected light) it controls, it may be cycled when seeing the light from the fixture it controls.

JL-202

Thermal Photocontrol

NEMA Twist-lock

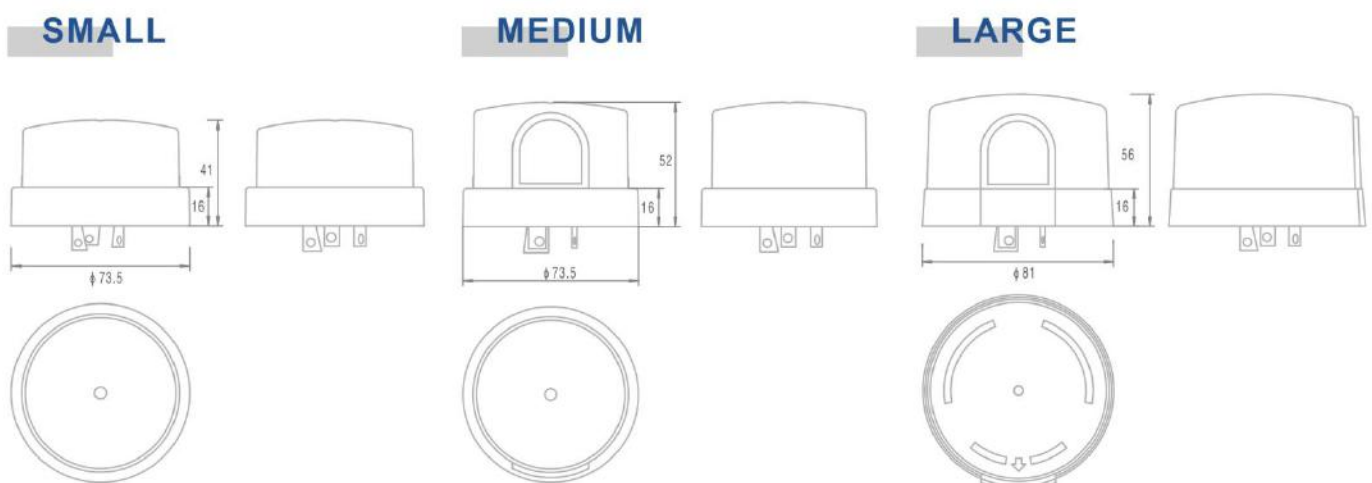


Product Summary

The photocontrol switch is applicable to control the street lighting and passage lighting automatically in accordance with the ambient lighting level.

This product is designed on the basis of thermal - bimetallic structure that provides time delay over 30 seconds to avoid redundancy operation due to spotlight or lightning during the night time. A temperature compensation system provides consistent performance regardless to the ambient temperature.

This product provides three twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

- ANSI C136.10 Twist-lock
- Time Delay Function
- Optional Surge Arrester Built-in
- Fail-On Mode
- UV Stabilized Enclosure
- IP54/IP65 Available

Specifications

Model No.	JL-202A	JL-202B	JL-202C	JL-202D
Rated Voltage	120VAC	220VAC	208VAC	277VAC
Rated Frequency	50/60Hz			
Rated Loading	1800W Tungsten, 1000VA Ballast			
Power Consumption	1.5W Max.			
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off			
Ambient Temperature	-40°C ~ +70°C			
Related Humidity	96%			
Clear Enclosure (null)	Available			
Fail Mode	Fail-On			
Shell material	PC			
IP level *	IP54 / IP65 / IP67			
Certifications	  			

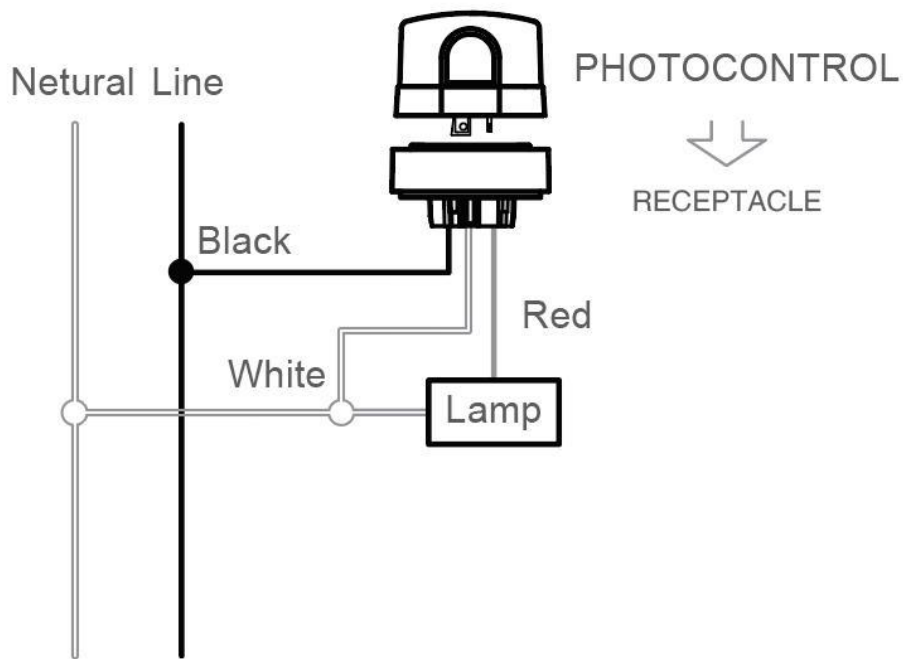
*Note: Standard and M models IP level: IP54;
H models IP level :IP54/IP65/IP67;

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- It is normal for the Photocontrol to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-202A M 12-IP65

JL-202	1	2	3	4
	A	M	12	IP65

1: A=120VAC

B=220VAC

C=208VAC

D=277VAC

2: M = medium shell with lens

H = large shell with lens

null = small base with transparent shell

3: 12 = MOV 110Joule / 3500Amp

15 = MOV 235Joule / 5000Amp

23 = MOV 460Joule / 7500Amp

null = no MOV

4: IP54 = Cross-linked Foam Plastic gasket

IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP67 = Full Silicon sealant +Silicon gasket

JL-204C

Electronic Photocontrol Fail-Off

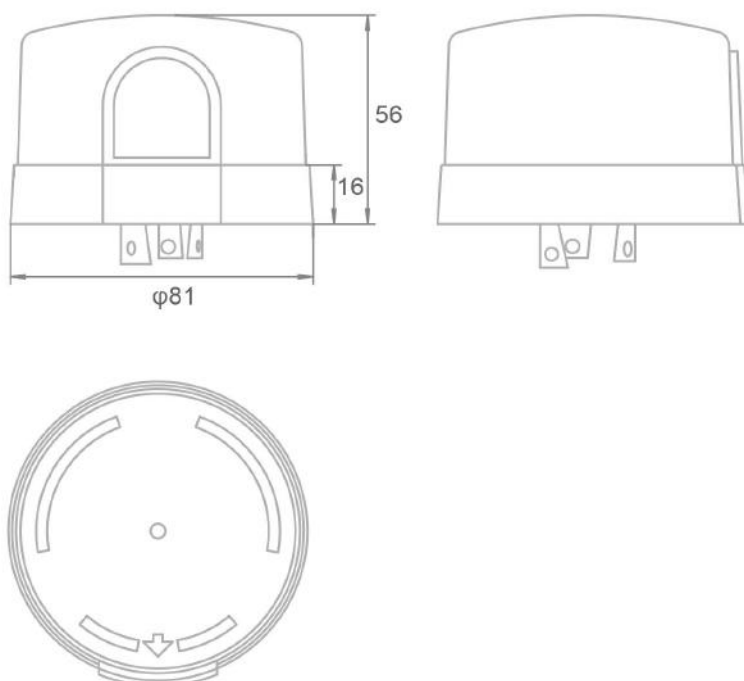


Product Summary

The photocontrol JL-204C is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. This product is designed with electronic circuits with phototransistor and a surge arrester (MOV) is provided. Especially, model JL-204C provides a wide voltage range for customer [Applications](#) under almost power supplies.

Further, a preset 5-10 seconds turn-off time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

- ANSI C136.10 Twist-lock
- Time Delay 5-10s
- Surge Arrester Built-in
- Fail-Off Mode
- UV Stabilized Enclosure
- IP54/IP65/IP67 Available

Specifications

Model No.	JL-204C
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305V AC
Rated Frequency	50/60Hz
Rated Loading	1000W Tungsten,1800VA Ballast, 8A@120VAC/5A@208-277VAC e-Ballast
Power Consumption	1.5W@120V
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-Off
Shell material	optional Sandwich cover
High protection	Sandwich cover (optional)
IP level	IP54 / IP65 / IP67
Certifications	  

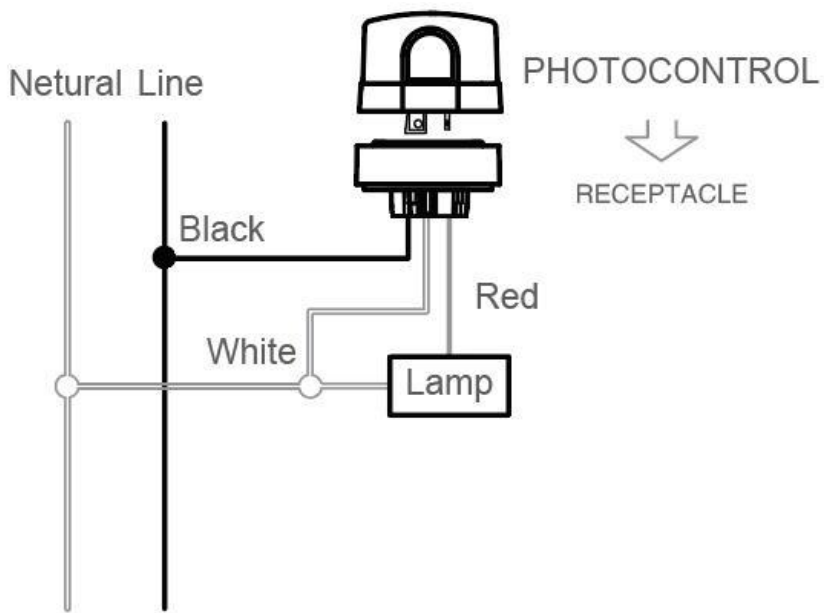
Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Install the photocontrol with the Photocell facing the NORTH direction as indicated on the top of the photocontrol.

Adjust the receptacle position if necessary.



Initial Testing

- It is normal for the Photocontrol to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-204C 12 C F -IP65

	1	2	3	4
JL-204C	12	C	F	IP65

1: 12 = MOV 110Joule / 3500Amp

15 = MOV 235Joule / 5000Amp

23 = MOV 460Joule / 7500Amp

2: C = PC cover

P = PP cover

K = PC+PC sandwich cover

3: D = Green

F = Blue

Customizable

4: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP54 = Cross-linked Foam Plastic gasket

IP67 = Full Silicon sealant +Silicon gasket

JL-205C & JL-205-12D/24D

Electronic Photocontrol Fail-On



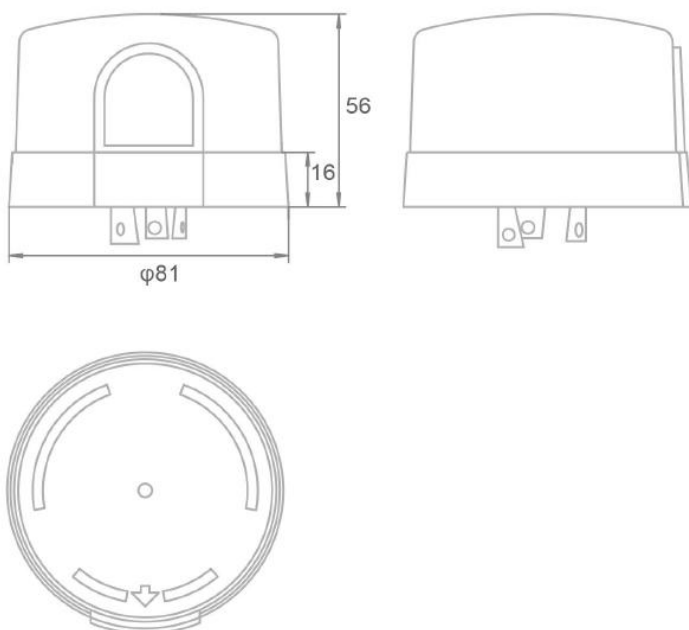
Product Summary

The photocontrol JL-205C is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. This product is designed with electronic circuits with phototransistor and a surge arrester (MOV) is provided. Especially, model JL-205C provides a wide voltage range for customer [Applications](#) under almost power supplies.

Further, a preset 3-20 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.

Besides, JL-205-12D/24D were expanded items for DC [Applications](#).



Features

- ANSI C136.10 Twist-lock
- Time Delay 3-20s
- Surge Arrester Built-in
- Fail-On Mode
- UV Stabilized Enclosure
- IP54/IP65/IP67 Available

Specifications

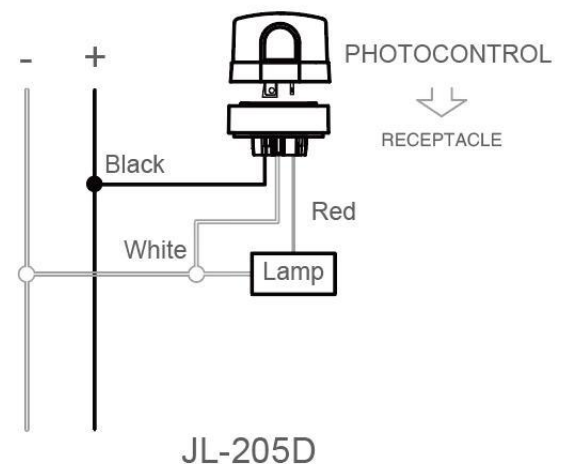
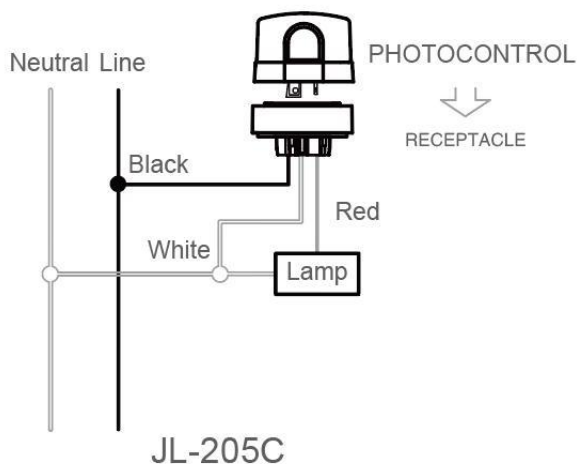
Model No.	JL-205C	JL-205-12D	JL-205-24D
Rated Voltage	120~277VAC	12VDC	24VDC
Rated Frequency	50/60Hz	-	
Applicable Voltage Range	105~305VAC	-	
Relay	15A		
Rated Loading	1000W Tungsten, 1800VA Ballast, 8A@120VAC/5A@208-277V e-Ballast	75W Tungsten 75VA Ballast 2A e-Ballast	150W Tungsten 150VA Ballast 2A e-Ballast
Power Consumption	3W@120V	-	-
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off		
Ambient Temperature	-40℃ ~ +70℃		
Related Humidity	96%		
Fail Mode	Fail-On		
Shell material	optional Sandwich cover		
High protection	Sandwich cover （optional）		
IP level	IP54 / IP65 / IP67		

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- The Photocontrol turns off immediately when initially installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-205 12 C F -IP65

	1	2	3	4
JL-205C	12	C	F	IP65

1: 12 = MOV 110Joule / 3500Amp

15 = MOV 235Joule / 5000Amp

23 = 460Joule / 10000Amp

2: C = PC cover;

P = PP cover

K = PC+PC sandwich cover

3: F = Blue

D = Green

Customizable

4: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP54 = Cross-linked Foam Plastic gasket

JL-205 12D C -IP65

JL-205	1	2	3
	12D	C	IP65

1: 12D=12VDC

24D=24VDC

2: C = PC cover

P = PP cover

K = PC+PC sandwich cover

3: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP54 = Cross-linked Foam Plastic gasket

IP67 = Full Silicon sealant +Silicon gasket

JL-206

Digital Electronic Photocontrol (Inverse example)



Product Summary

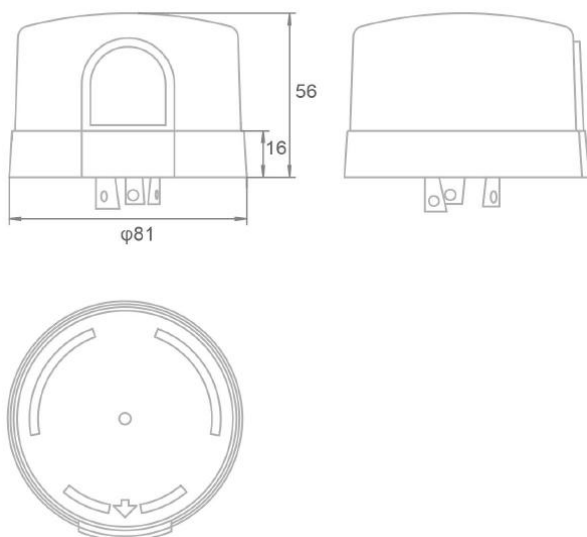
The photocontrol JL-206 series is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level, with saving energy feature at dawn.

This product is designed with microprocessor circuits with IR-filtered phototransistor and a surge arrester (MOV) is provided.

Further, a preset 5-20 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

The long-life version can maintain constant and reliable characteristics. The relay can have more than 10000 working life cycles. When the double-layer protective shell is installed, it can provide a longer working life for JL-206. The HP version provides a higher load.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

- ANSI C136.10 Twist-lock
- Multi-Volts Application
- Inverse proportional illuminance
- Fully Customization Available
- Surge Arrester Built-in
- IR filtered Phototransistor
- Midnight Sleeping Available
- Zero-Cross technology inside
- Fail-On / Fail-Off Modes Available
- UV stabilized enclosure
- Supports FCC class A

Specifications

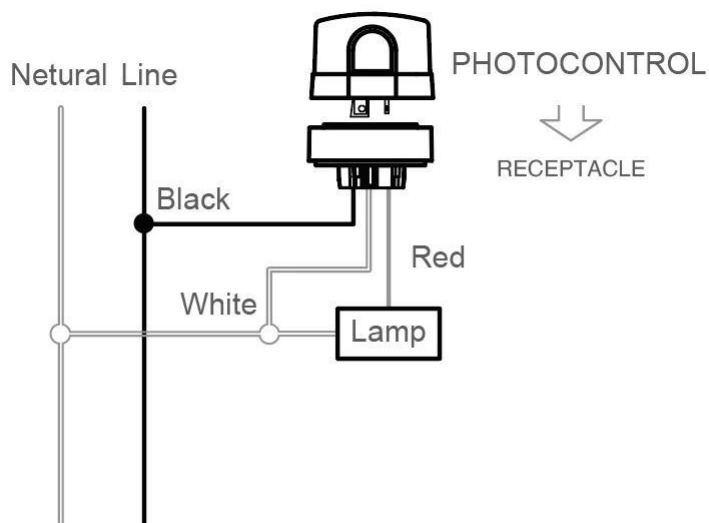
Model No.	JL-206C	JL-206CHP	JL-206E	JL-206F
Rate Voltage	120~277VAC		347VAC	480VAC
Applicable Voltage Range	105~305VAC		105~382VAC	105~528VAC
Rated Frequency	50/60Hz			
Related Humidity	96%			
Ambient Temperature	-40°C~+70°C			
Failure mode	C5: Fail-On C4: Fail-Off	C5HP: Fail-On C4HP: Fail-Off	E5: Fail-On E4: Fail-Off	F5: Fail-On F4: Fail-Off
Rated Loading	1000W Tungsten, 1800VA Ballast,	1800W@120VAC 2000W@208-277VAC	1800W Tungsten,	1800W Tungsten,

	8A@120VAC/ 5A@208-277VAC e-Ballast	Tungsten, 1800VA@120VAC 2000VA@208-277VAC Ballast	1800VA Ballast, 5A e-Ballast	1800VA Ballast,
Operate Levels	24Lx On / 16Lx Off			
Shell material	optional Sandwich cover			
Power consumption	0.5W Max.	0.9W Max.	0.5W Max.	
High protection	Sandwich cover (optional)			
IP level	IP54 / IP65 / IP67			
Factory settings	Illuminance/Delayed Customizable			
Zero crossing control	●		N/A	
FCC	●	N/A		
Certifications	  		 	

Installation

Disconnect power; wire the receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.



Install the photocontrol with the Photocell facing the NORTH direction as indicated on the top of the photocontrol.

Adjust the receptacle position if necessary.

Initial Testing

- It is normal for the Photocontrol to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.
- Do not repeat test for over 4 hours.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-206C 5 F12 N HP P F -IP65 (24 05 16 05 T3.0) Z

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
JL-206	C	5	F12	N	HP	P	F	IP65	24	05	16	05	T3.0	Z

1: C = 120~277VAC

E = 347VAC

- F = 480VAC
- 2: 5 = Fail-On
 - 4 = Fail-Off
- 3: F12 = MOV, 110J/3500A
 - F15 = MOV, 235J/5000A
 - F23 = MOV, 460J/10000A
 - F25 = MOV, 546J/10000A
 - F40 = MOV, 640J/ 40000A
 - M4K = MOV, 4KV Surge
 - D6K = R/C, 6KV Surge
 - R2W = R/C, 20KV Surge
 - A2W = A/D, 20KV Surge
- 4: F = EMI verified, Class B
 - N = EMI not verified
- 5: HP = Hi-Power 20Amp
 - S = Standard 10Amp
- 6: P = UV Stabilized Polypropylene
 - C = UV Stabilized Polycarbonate
 - K = PC+PC sandwich cover
- 7: F = Blue D = Green H = Black
 - K = Gray Option
- 8: IP65 = Silicon sealant + Thermalplastic Elastomer gasket
 - IP54 = Cross-linked Foam Plastic gasket
 - IP66 = Silicon sealant + Silicon gasket
 - IP67 = Full Silicon sealant +Silicon gasket
- 9: Turn-On Level in Lux
- 10: Turn-On Time Delay (in sec.)
- 11: Turn-Off Level in Lux
- 12: Turn-Off Time Delay (in sec.)
- 13: Midnight Sleeping Time in hour (option)
- 14: Z = Long-Life with Zero-cross Technology
 - N = none

JL-216

Digital Electronic Photocontrol (Inverse example)



Product Summary

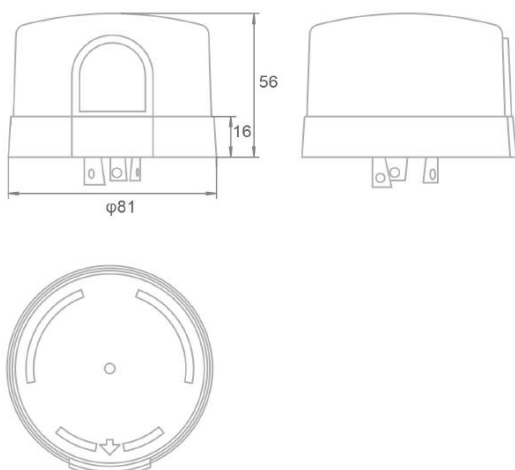
The photocontrol JL-216 series is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level, with saving energy feature at dawn.

This product is designed with microprocessor circuits with IR-filtered phototransistor and a surge arrester (MOV) is provided.

Further, a preset 5-20 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

The long-life version can maintain constant and reliable characteristics. The relay can have more than 10000 working life cycles. When the double-layer protective shell is installed, it can provide a longer working life for JL-216.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

- ANSI C136.10 Twist-lock
- Multi-Volts Application
- Inverse proportional illuminance
- Fully Customization Available
- Surge Arrester Built-in
- IR filtered Phototransistor
- Midnight Sleeping Available
- Zero-Cross technology inside
- Fail-On / Fail-Off Modes Available
- UV stabilized enclosure
- Supports FCC class A

Specifications

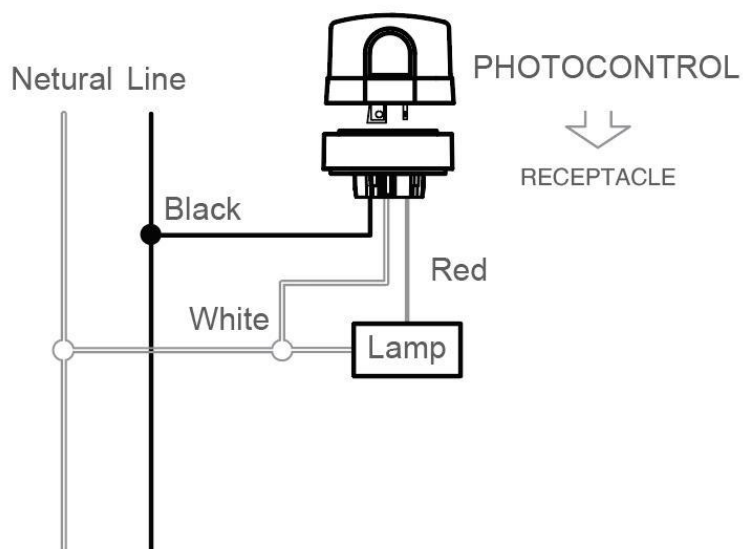
Model No.	JL-216C	JL-216E	JL-206F
Rate Voltage	120~277VAC	347VAC	480VAC
Applicable Voltage Range	105~305VAC	105~382VAC	105~528VAC
Rated Frequency	50/60Hz		
Rated Loading	1000W Tungsten, 1800VA Ballast, 8A@120VAC/ 5A@208-277VAC e-Ballast	1800W Tungsten, 1800VA Ballast, 5A e-Ballast	1800W Tungsten, 1800VA Ballast
Power consumption	0.5W Max.		
Surge Immunity	4kV/6kV/20kV	N/A	
Operate Levels	24Lx On / 16Lx Off / per client request		

Ambient Temperature	-40°C ~ +70°C		
Fail Mode	C5: Fail-On C4: Fail-Off	E5: Fail-On E4: Fail-Off	F5: Fail-On F4: Fail-Off
Shell material	optional		
High protection	Sandwich cover		
Zero crossing control	●	N/A	
FCC	●	N/A	
IP level	IP54 / IP65 / IP67		
Factory settings	Illuminance/Delayed Customizable		
Certifications	  	 	

Installation

Disconnect power; wire the receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.



Install the photocontrol with the Photocell facing the NORTH direction as indicated on the top of the photocontrol.

Adjust the receptacle position if necessary.

Initial Testing

- It is normal for the Photocontrol to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.
- Do not repeat test for over 4 hours.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-216C 5 F12 F P F -IP65 (24 05 16 05 T3.0) Z

	1	2	3	4	5	6	7	8	9	10	11	12	13
JL-216	C	5	F12	F	P	F	IP65	24	05	16	05	T3.0	Z

1: C = 120~277VAC

- E = 347VAC
- F = 480VAC
- 2: 5 = Fail-On
 - 4 = Fail-Off
- 3: F12 = MOV, 110J/3500A
 - F15 = MOV, 235J/5000A
 - F23 = MOV, 460J/10000A
 - F25 = MOV, 546J/10000A
 - F40 = MOV, 640J/ 40000A
 - M4K = MOV, 4KV Surge
 - D6K = R/C, 6KV Surge
 - R2W = R/C, 20KV Surge
 - A2W = A/D, 20KV Surge
- 4: F = EMI verified, Class B
 - N = EMI not verified
- 5: P = UV Stabilized Polypropylene
 - C = UV Stabilized Polycarbonate
 - K = PC+PC sandwich cover
- 6: F = Blue D = Green H = Black
 - K = Gray Option
- 7: IP65 = Silicon sealant + Thermalplastic Elastomer gasket
 - IP54 = Cross-linked Foam Plastic gasket
 - IP66 = Silicon sealant + Silicon gasket
 - IP67 = Full Silicon sealant +Silicon gasket
- 8: Turn-On Level in Lux
- 9: Turn-On Time Delay (in sec.)
- 10: Turn-Off Level in Lux
- 11: Turn-Off Time Delay (in sec.)
- 12: Midnight Sleeping Time in hour (option)
- 13: Z = Long-Life with Zero-cross Technology
 - N = none

JL-207

Digital Electronic Photocontrol



Product Summary

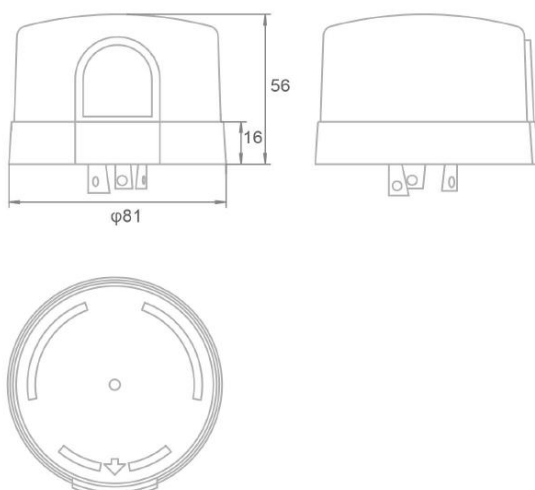
The photocontrol JL-207 series is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level, with saving energy feature at dawn.

This product is designed with microprocessor circuits with IR-filtered phototransistor and a surge arrester (MOV) is provided.

Further, a preset 5-20 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

The long-life version can maintain constant and reliable characteristics. The relay can have more than 10000 working life cycles. When the double-layer protective shell is installed, it can provide a longer working life for JL-207. The HP version provides a higher load.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

- ANSI C136.10 Twist Lock
- Fully Customization Available
- Surge Arrester Built-in
- IR-filtered Phototransistor
- Fail-On / Fail-Off Modes Available
- UV stabilized enclosure
- Midnight Sleeping Available
- Zero-Cross Technology Inside
- Supports FCC Class A / Class C

Specifications

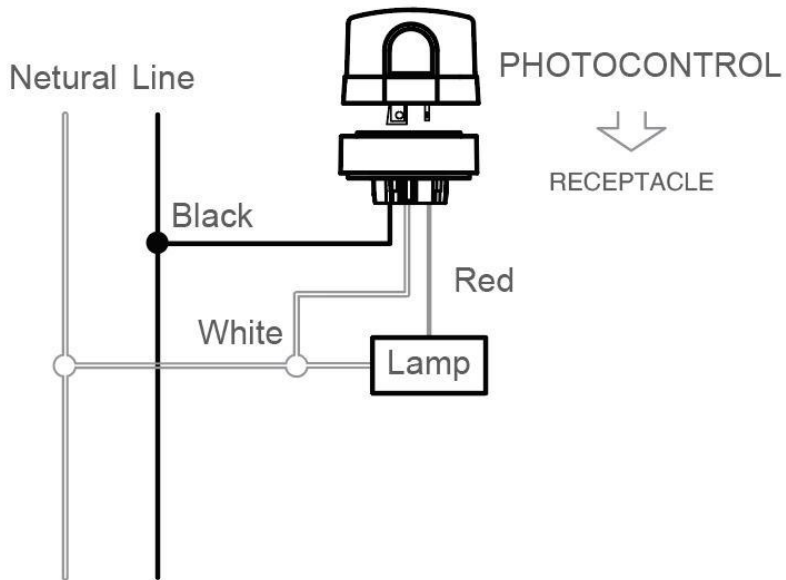
Model No.	JL-207C	JL-207CHP	JL-207E	JL-207F
Rate Voltage	120~277VAC		347VAC	480VAC
Applicable Voltage Range	105~305VAC		105~382VAC	105~528VAC
Rated Voltage	50/60Hz			
Related Humidity	96%			
Ambient Temperature	-40°C~+70°C			
Failure mode	C5: Fail-On C4: Fail-Off	C5HP: Fail-On C4HP: Fail-Off	E5: Fail-On E4: Fail-Off	F5: Fail-On F4: Fail-Off
Rated Loading	1000W Tungsten, 1800VA Ballast, 8A@120VAC/ 5A@208-277VAC e-Ballast	1800W@120VAC 2000W@208-277VAC Tungsten, 1800VA@120VAC 2000VA@208-277VAC Ballast	1800W Tungsten, 1800VA Ballast, 5A e-Ballast	1800W Tungsten, 1800VA Ballast

Operate Levels	16Lx On / 24Lx Off (Typical)		
Shell material	optional Sandwich cover		
Power consumption	0.5W Max.	0.9W Max.	0.5W Max.
High protection	sandwich cover (optional)		
IP level	IP54 / IP65 / IP67		
Factory settings	Illuminance/Delayed Customizable		
Zero crossing control	●		N/A
FCC	●		N/A
Certifications		ANSI C136.10-2017 	

Installation

Disconnect power; wire the receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.



Install the photocontrol with the Photocell facing the NORTH direction as indicated on the top of the photocontrol.

Adjust the receptacle position if necessary.

Initial Testing

- The Photocontrol turn off immediately when first installed.
- To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.
- Do not repeat test for over 4 hours.

Ordering Information

JL-207C 5 F12 F HP P F -IP65 (16 05 24 05 T3.0) Z

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
JL-207	C	5	F12	F	HP	P	F	IP65	16	05	24	05	T3.0	Z

1: C = 120~277VAC

E = 347VAC

- F = 480VAC
- 2: 5 = Fail-On
4 = Fail-Off
- 3: F12 = MOV, 110J/3500A
F15 = MOV, 235J/5000A
F23 = MOV, 460J/10000A
F25 = MOV, 546J/10000A
- 4: F = EMI verified, Class B
N = EMI not verified
- 5: HP = Hi-Power 20Amp
S = Standard 10Amp
HV= for E/F voltage only
- 6: P = UV Stabilized Polypropylene
C = UV Stabilized Polycarbonate
K = PC+PC sandwich cover
- 7: F = Blue D = Green H = Black
K = Gray Option
- 8: IP65 = Silicon sealant + Thermalplastic Elastomer gasket
IP54 = Cross-linked Foam Plastic gasket
IP66 = Silicon sealant + Silicon gasket
IP67 = Full Silicon sealant +Silicon gasket
- 9: Turn-On Level in Lux
- 10: Turn-On Time Delay (in sec.)
- 11: Turn-Off Level in Lux
- 12: Turn-Off Time Delay (in sec.)
- 13: Optional mid night light off duration (hours)
- 14: Z = Zero-cross Technology
L=Long-Life (With zero-cross control technology)
N = none

JL-217 Digital Electronic Photocontrol



Product Summary

The photocontrol JL-217 series is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level, where higher lightning protection feature is required.

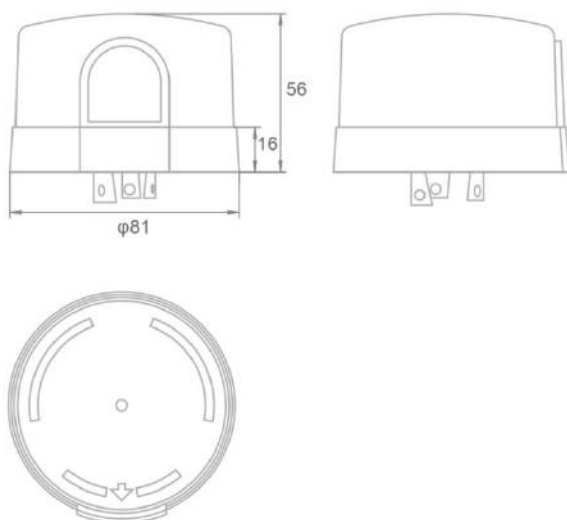
This product is designed with microprocessor circuits with IR-filtered phototransistor and a surge arrester (MOV) is provided.

Further, a preset 5-20 seconds time-delay for turning-off might avoid redundancy operation due to spotlight or lightning during the night time.

The long-life version can maintain constant and reliable characteristics. The relay can have more than 10000 working life cycles. When the double-layer protective shell is installed, it can provide a longer working life for JL-217.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting UL773.

Three Line Of Sight Draft



Features

- ANSI C136.10 Twist-lock
- Multi-Volts Application
- Fully Customization Available
- Surge Arrester Built-in IR filtered Phototransistor
- Fail-On / Fail-Off Modes Available
- Zero Cross Technology inside
- 6kV Differential-Mode A

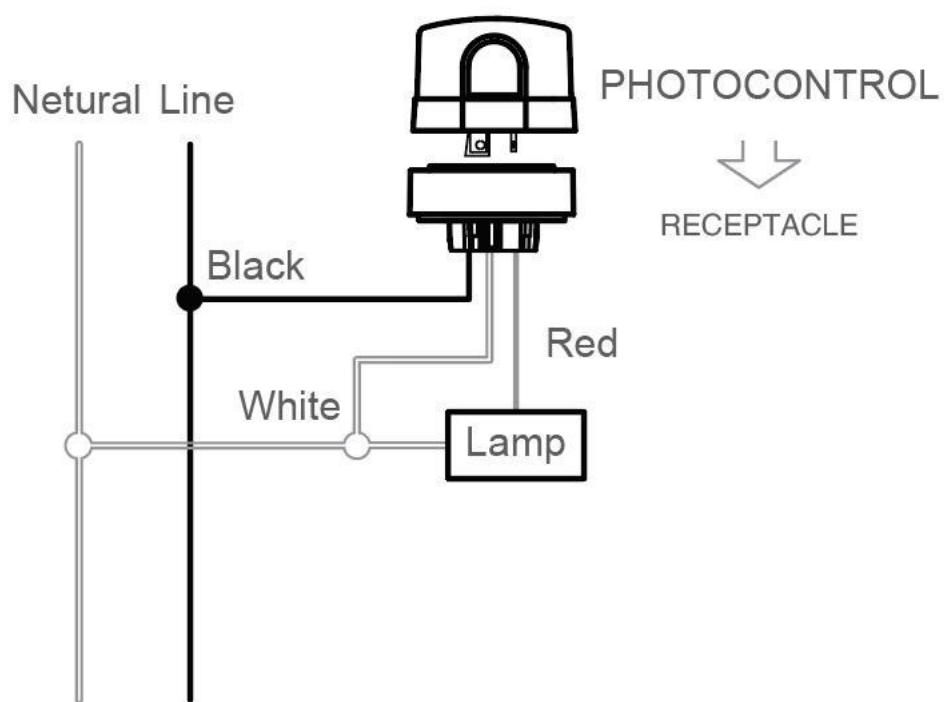
Specifications

Model No.	JL-217C	JL-217E	JL-217F
Rate Voltage	120~277VAC	347VAC	480VAC
Applicable Voltage Range	105~305VAC	105~382VAC	105~528VAC
Rated Frequency	50/60Hz		
Rated Loading	1000W Tungsten, 1800VA Ballast, 8A@120VAC/ 5A@208-277VAC e-Ballast	1800W Tungsten, 1800VA Ballast, 5A e-Ballast	1800W Tungsten, 1800VA Ballast
Power Consumption	0.5W Max.		
Surge Immunity	4kV/6kV/20kV		N/A
Operate Levels	16Lx On / 24Lx Off / per client request		
Ambient Temperature	-40°C ~ +70°C		
Fail Mode	C5: Fail-On C4: Fail-Off	E5: Fail-On E4: Fail-Off	F5: Fail-On F4: Fail-Off

Shell material	optional	
High protection	Sandwich cover	
Zero-cross	●	N/A
FCC	●	N/A
IP level	IP54 / IP65 / IP67	
Factory settings	Illuminance/Delayed Customizable	
Certifications	  	

Installation

- Disconnect power; wire the receptacle according to the diagram below.
- Push the photocontrol on and twist it clockwise to lock it into the receptacle.



- Install the photocontrol with the Photocell facing the NORTH direction as indicated on the top of the photocontrol.

- Adjust the receptacle position if necessary.

Initial Testing

- It is normal for the Photocontrol to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.
- Do not repeat test for over 4 hours.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-217C 5 M4K F P F -IP65 (16 05 24 05 T3.0) Z

	1	2	3	4	5	6	7	8	9	10	11	12	13
JL-217	C	5	M4K	F	P	F	IP65	16	05	24	05	T3.0	Z

1: C = 120~277VAC

E = 347VAC

F = 480VAC

2: 5 = Fail-On

4 = Fail-Off

3: M4K = MOV, 4KV Surge

D6K = R/C, 6KV Surge

R2W = R/C, 20KV Surge

A2W = A/D, 20KV Surge

4: F = EMI verified, Class B

N = EMI not verified

5: P = UV Stabilized Polypropylene

C = UV Stabilized Polycarbonate

K = PC+PC sandwich cover

6: F = Blue D = Green H = Black

K = Gray Option

7: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP54 = Cross-linked Foam Plastic gasket

IP66 = Silicon sealant + Silicon gasket

IP67 = Full Silicon sealant + Silicon gasket

8: Turn-On Level in Lux

9: Turn-On Time Delay (in sec.)

10: Turn-Off Level in Lux

11: Turn-Off Time Delay (in sec.)

12: Midnight Sleeping Time in hour (option)

13: Z = Zero-cross Technology

L=Long-Life (With zero-cross control technology)

N = none

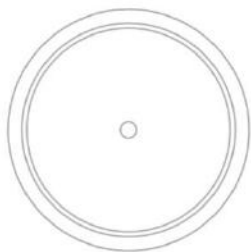
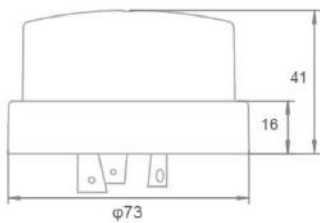
JL-208-IP54

Shorting Cap



Product Summary

- Short a twist-lock photocontrol receptacle while under maintenance
- ANSI C136.10 Twist-lock
- IP54 protection while installed
- UV stabilized Polycarbonate enclosure
- High impact Polybutylene Terephthalate base



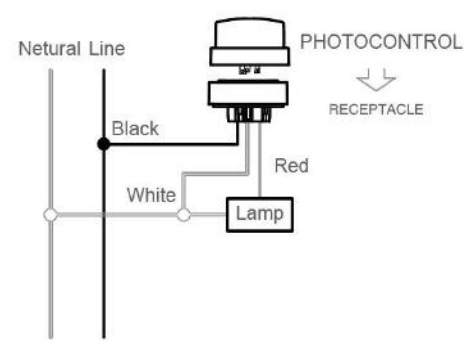
Specifications

Model No.	JL-208-IP54
Rated Loading	7200W Tungsten, 7200VA Ballast

Maximum Voltage	0~480VAC
Rated Frequency	50/60Hz
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Shell material	PC
IP level	IP54
Certifications	  

Installation

Disconnect power; wire the receptacle according to the diagram below. Push the Shorting Cap on and twist it clockwise to lock it into the receptacle.



Ordering Information

JL-208-12-IP54

JL-208	1	IP54
	12	

- 1: 12 = MOV 110Joule / 3500Amp
- 15 = MOV 235Joule / 5000Amp
- 23 = MOV 460Joule / 7500Amp
- null = no pressure sensitive

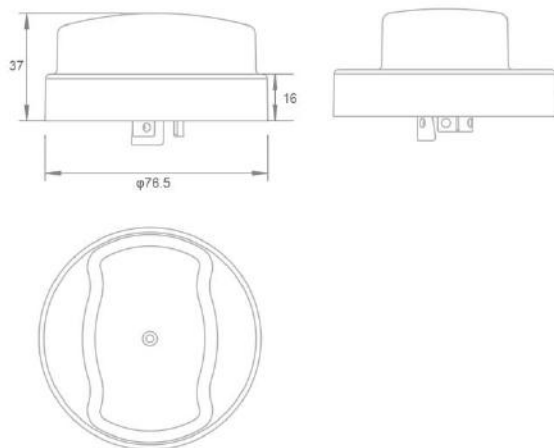
JL-208-IP66

Shorting Cap



Product Summary

- Short a twist-lock photocontrol receptacle while under maintenance
- Applicable with both ANSI C136.10 & C136.41
- IP66 protection while installed
- UV stabilized Polycarbonate enclosure
- High impact Polybutylene Terephthalate base
- Easy-to-handle Twist-bar Enclosure



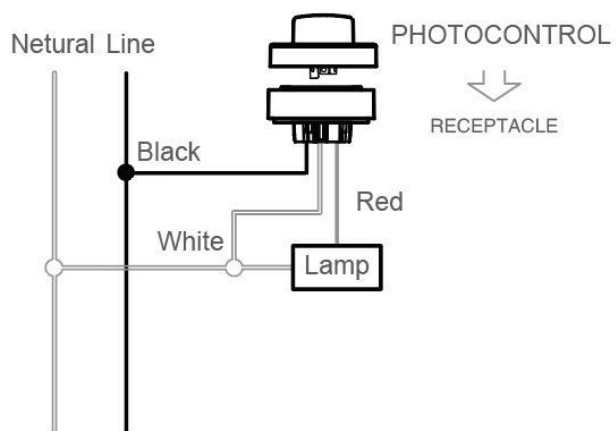
Specifications

Model No.	JL-208-IP66
Rated Loading	7200W Tungsten, 7200VA Ballast

Maximum Voltage	0~480VAC
Rated Frequency	50/60Hz
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Shell material	PC
IP level	IP66
Certifications	    

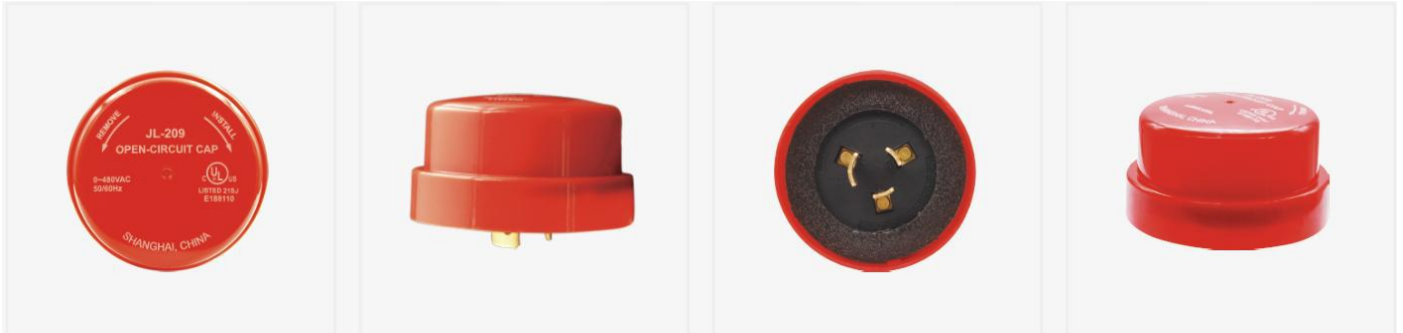
Installation

Disconnect power; wire the receptacle according to the diagram below. Push the Shorting Cap on and twist it clockwise to lock it into the receptacle.



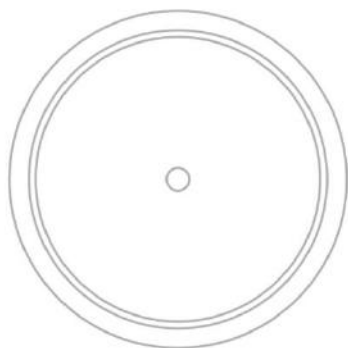
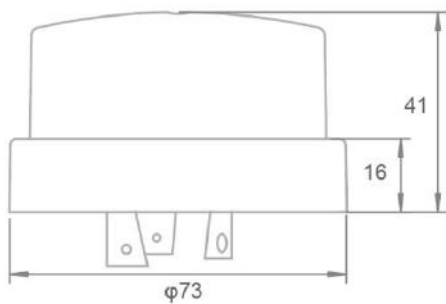
JL-209-IP54

Open-Circuit Cap



Product Summary

- Intend to break a twist-lock photocontrol receptacle while under maintenance
- ANSI C136.10 Twist-lock
- IP54 protection while installed
- UV stabilized Polycarbonate Enclosure
- High impact polybutylene terephthalate base



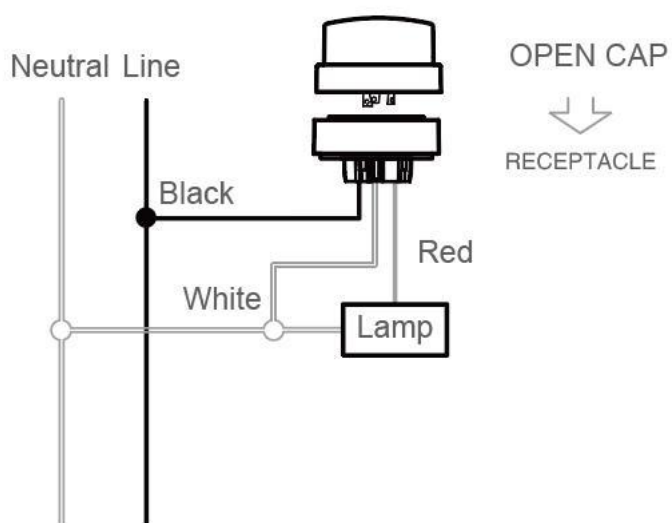
Specifications

Model No.	JL-209-IP54
Rated Voltage	0~480VAC
Rated Frequency	50/60Hz
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Shell material	PC
IP level	IP54
Certifications	  

Installation

Disconnect power; wire the receptacle according to the diagram in below.

Push the open cap on and twist it clockwise to lock it into the receptacle.



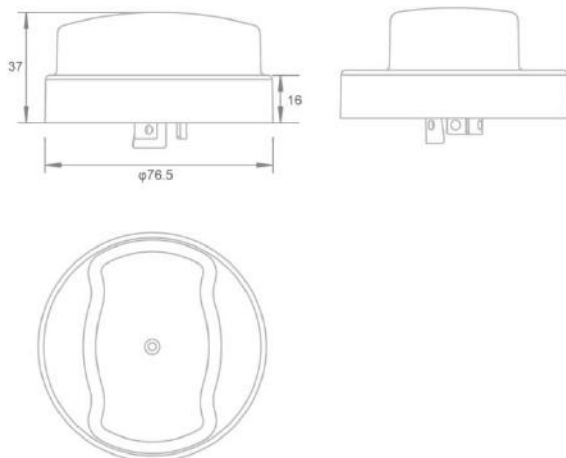
JL-209-IP66

Open-Circuit Cap



Product Summary

- Intend to break a twist-lock photocontrol receptacle while under maintenance
- ANSI C136.10 Twist-lock
- IP66 protection while installed
- UV stabilized Polycarbonate Enclosure
- High impact polybutylene terephthalate base
- Easy-to-handle Twist-bar Enclosure



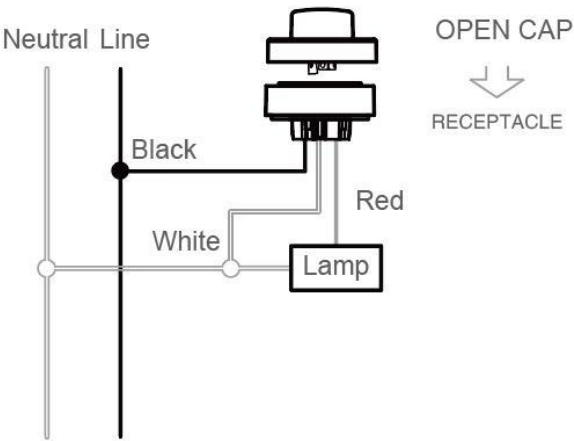
Specifications

Model No.	JL-209-IP66
Rated Voltage	0~480VAC

Rated Frequency	50/60Hz
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Shell material	PC
IP level	IP66
Certifications	  

Installation

Disconnect power; wire the receptacle according to the diagram in below.
 Push the open cap on and twist it clockwise to lock it into the receptacle.



Ordering Information

JL-209-12-IP66

JL-209	1	IP66
	12	

- 1: 12 = MOV 110Joule / 3500Amp
- 15 = MOV 235Joule / 5000Amp
- 23 = MOV 460Joule / 7500Amp

JL-214B

PECU (UK version steeple top cover)



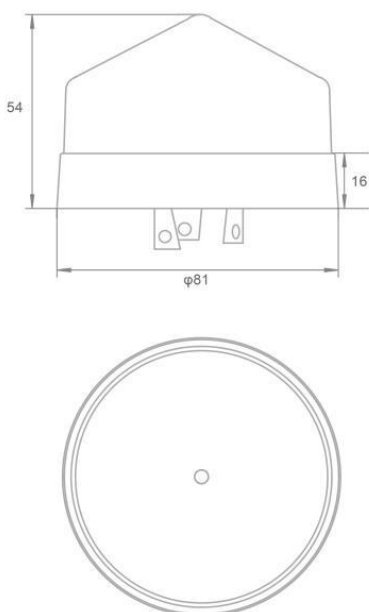
Product Summary

The PECU JL-214B is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level.

This product is designed with electronic circuits with sensor of phototransistor and a surge arrester (MOV) is provided. Especially, model JL-214B has an face-top sensor for customer [Applications](#) per BS5972.

Further, a preset 5-30 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

This product provides twist-lock terminals meets the requirements of BS5972 and this series conforms the CE (UKCA) and RoHS directives.



Features

- BS5972
- ANSI C136.10 Twist-lock
- Time Delay 5-30s
- Multi-Volts Available
- Surge Arrester Built-in
- Phototransistor sensor
- Use with a BS5972 Twist-lock receptacle

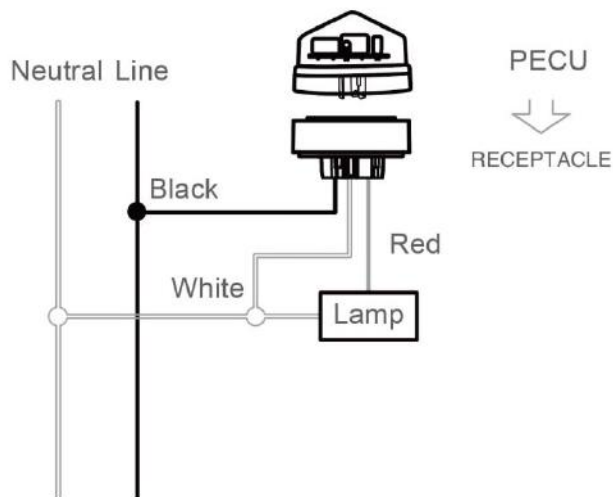
Specifications

Model No.	JL-214B
Rated Voltage	220~240VAC
Rated Frequency	50/60Hz
Rated Loading	1000W Tungsten, 1800VA Ballast
Power Consumption	8W@240VAC
Operate Levels	On < 20Lx, off > 80Lx
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-Off
Shell material	PC
IP level	IP54
Certifications	    

Installation

Disconnect power; wire the receptacle according to the diagram below.

Push the PECU on and twist it clockwise to lock it into the receptacle.



Initial Testing

- It is normal for the PECU to take several seconds to turn off when first installed.
- To test “turn on” during daytime, cover the body with black bag or other opaque material.
- Do not cover with hand because the light traveling through may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

Ordering Information

JL-214B 12 K-IP54

JL-214B	1	2	IP54
	12	K	

1: 12 = MOV 110Joule / 3500Amp

2: K (option) = Kit package with JL-210K Receptacle

JL-224B

PECU (UK version steeple top cover)

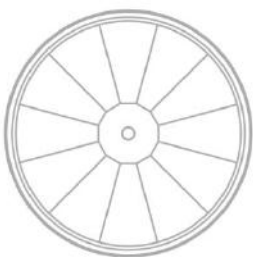
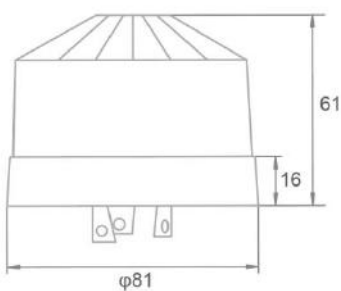


Product Summary

The photocontrol JL-224B is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. This product is designed with electronic circuits with sensor of phototransistor and a surge arrester (MOV) is provided. Especially, model JL-224B has an omnidirectional face-top sensor for customer [Applications](#) per BS5972.

Further, a preset 5-30 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

This product provides twist lock terminals meets the requirements of BS5972 and this series conforms the CE and RoHS directives.



Features

- BS5972
- ANSI C136.10 Twist-lock
- Time Delay 5-30s
- Multi-Volts Available
- Surge Arrester Built-in
- Phototransistor sensor
- Use with a BS5972 Twist-lock receptacle

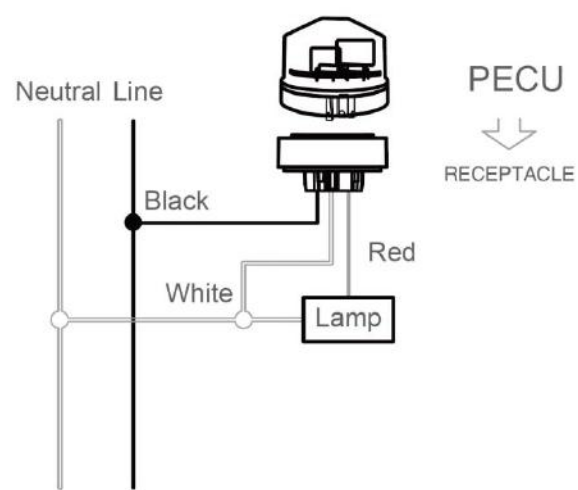
Specifications

Model No.	JL-224B	JL-224C
Rated Voltage	220~240VAC	120~277VC
Applicable Voltage Range	—	105~305VAC
Rated Frequency	50/60Hz	
Rated Loading	1000W Tungsten, 1000VA Ballast	
Power Consumption	8W@240VAC	3W@120VAC
Operate Levels	On < 20Lx, off > 80Lx	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Fail Mode	Fail-Off	
Shell material	PC	
IP level	IP54	
Certifications	    	 

Installation

Disconnect power; wire the receptacle according to the diagram below.

Push the PECU on and twist it clockwise to lock it into the receptacle.



Initial Testing

- It is normal for the PECU to take several seconds to turn off when first installed.
- To test “turn on” during daytime, cover the body with black bag or other opaque material.
- Do not cover with hand because the light traveling through may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

Ordering Information

JL-224B-12 K IP54

JL-224	1	2	3	IP54
	B	12	K	

1: B=220-240VAC

C=120-277VAC

2: 12 = MOV 110Joule / 3500Amp

15 = MOV 235Joule / 5000Amp

3: k (option) =210K Receptacle

JL-215C

Improved Electronic Photocontrol

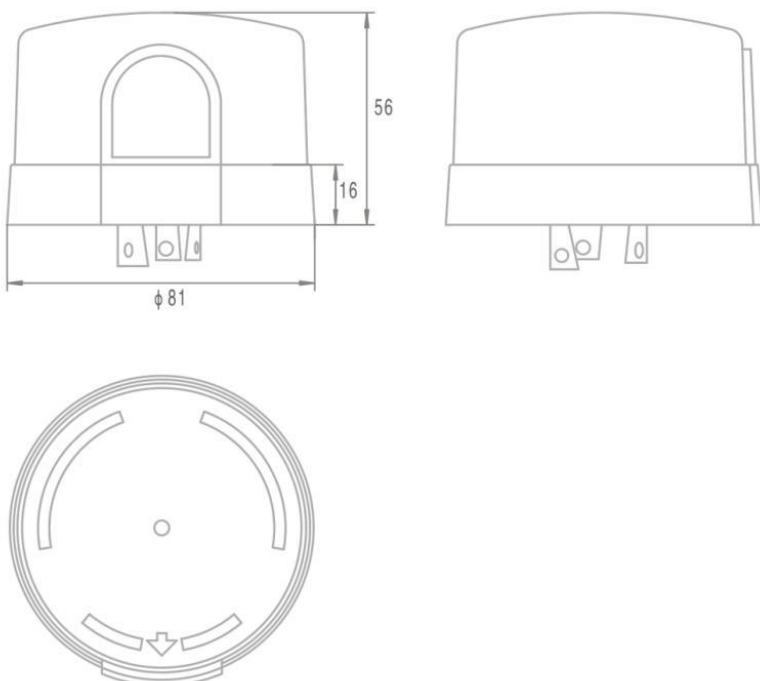


Product Summary

The photocontrol JL-215C is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. This product is designed with electronic circuits with Phototransistor and a surge arrester (MOV) is provided. Especially, model JL-215C provides much better power factor performance than JL-205C series.

Further, a preset 3-20 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.

This product provides Twist-lock terminals meeting the requirements of ANSI C136.10 and the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

- ANSI C136.10 Twist-lock
- Time Delay 3-20s
- Surge Arrester Built-in
- IR-Filtered Phototransistor
- Higher Power Factor *

Note: * Compared to JL-205C

Specifications

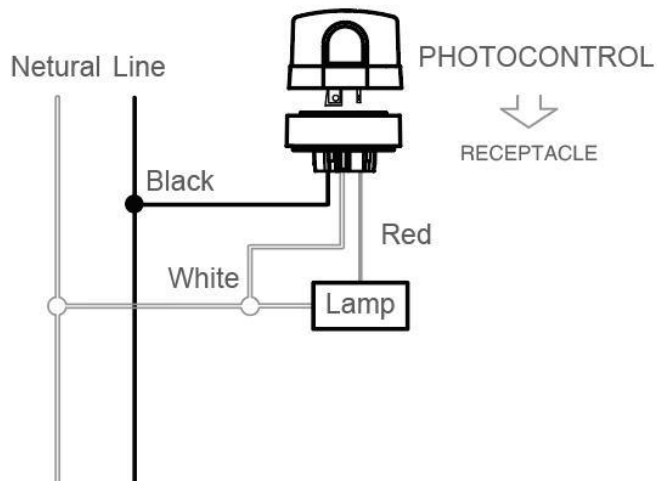
Model No.	JL-215C
Rated Voltage	120~277VAC
Rated Frequency	50/60Hz
Applicable Voltage Range	105~305VAC
Rated Loading	1000W Tungsten, 1800VA Ballast 8A@120VAC/5A@208-277VAC e-Ballast
Power Consumption	0.5W Max.
Operate Levels	10~30Lx Turn-On / 30~60Lx Turn-Off
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell material	optional Sandwich cover
FCC	●
IP level	IP54 / IP65 / IP67
Certifications	  

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- The Photocontrol turns off immediately when initially installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-215C12 C F -IP65

	1	2	3	4
JL-215C	12	C	F	IP65

1: 12 = MOV 110Joule / 3500Amp

15 = MOV 235Joule / 5000Amp

23 = MOV 460Joule / 7500Amp

2: C = PC cover

P = PP cover

K = PC+PC sandwich cover

3: F = Blue D = Green

Customizable

4: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP54 = Cross-linked Foam Plastic gasket

IP67 = Full Silicon sealant + Silicon gasket

JL-235CZ

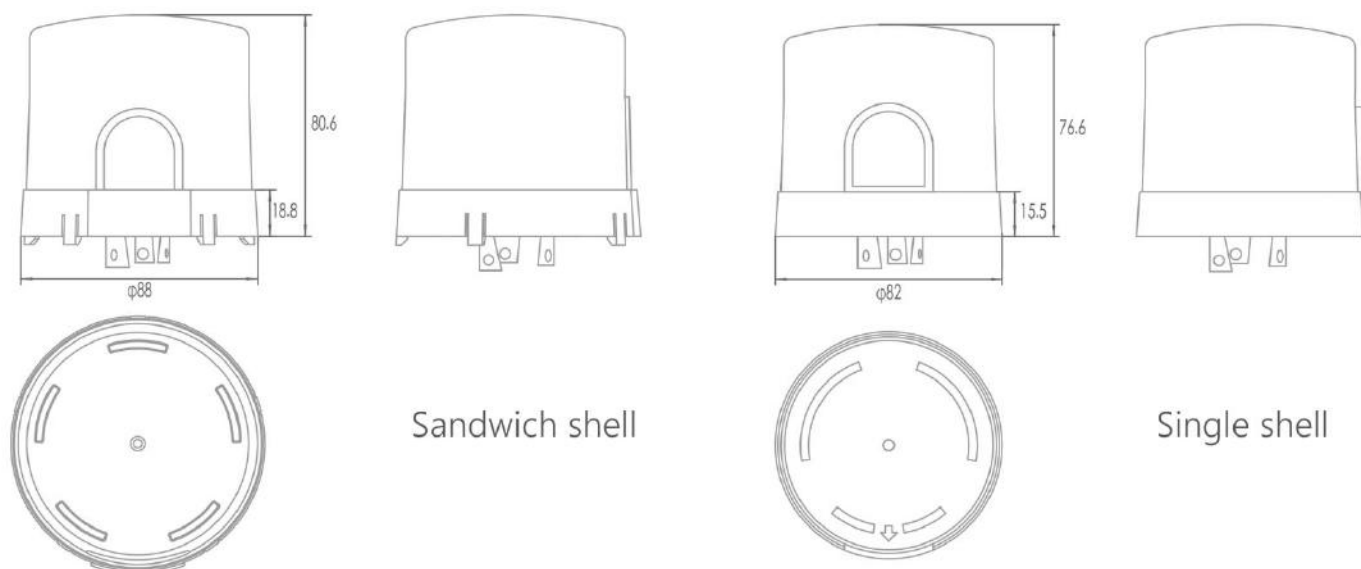
Zigbee* remote Photocontrol



Product Summary

The photocontrol JL-235CZ is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level, and / or the remote system.

This product consists a Zigbee communication module to allow its remoted with a smart IoT management system.



Features

- ANSI C136.10 Twist-lock
- Fail-On Mode
- Time Delay 5-20s

- Multi-Volts Available
- Surge Arrester Built-in
- IR-Filtered Phototransistor

Specifications

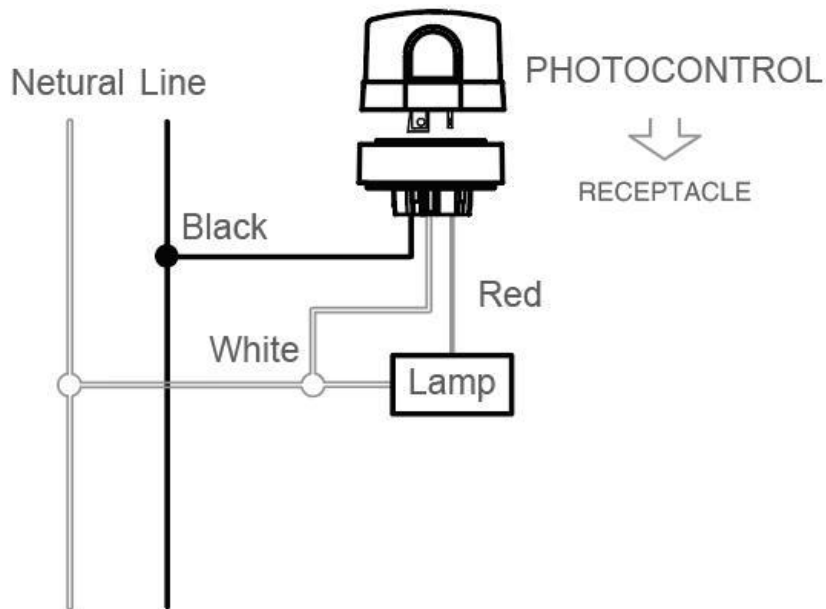
Model No.	JL-235CZ
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Wireless Communication (down)	Zigbee
Spectral Acquisition Range	350~1100nm ; Peak wavelength: 590nm
Rated Loading	1000W Tungsten, 1000VA Ballast 8A e-Ballast @120VAC/5A e-Ballast @208-277VAC
Power Consumption	2.4W Max.
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell Material	PC+PC
Optional High Protection	Double Shell
Surge protection level	6KV/3KA
IP level	IP65 / IP67
Factory settings	Remote control+Adaptive mode
Certifications	  

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- The Photocontrol turns off immediately when initially installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

JL-236CG

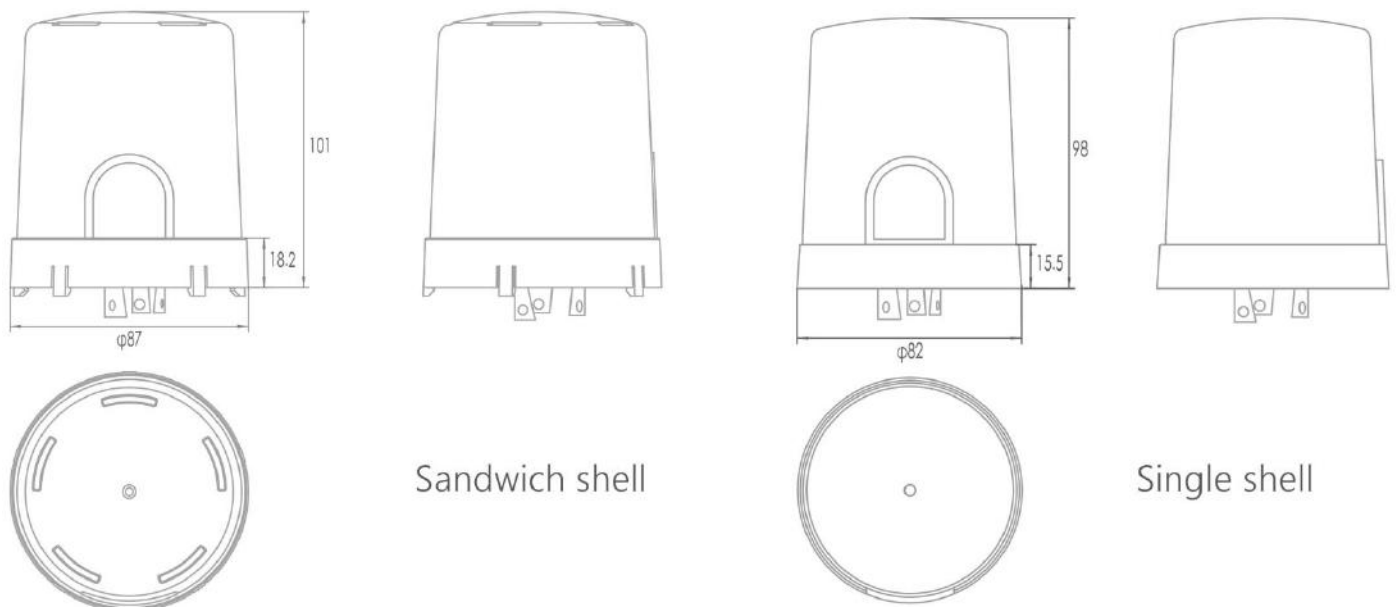
Zigbee* remote Photocontrol



Product Summary

The photocontrol JL-236CG is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level, and / or the remote system.

This product consists a Zigbee communication module to allow its remoted with a smart IoT management system.



Features

- ANSI C136.10 Twist-lock
- Fail-On Mode
- Time Delay 5-20s

- Multi-Volts Available
- Surge Arrester Built-in
- IR-Filtered Phototransistor

Specifications

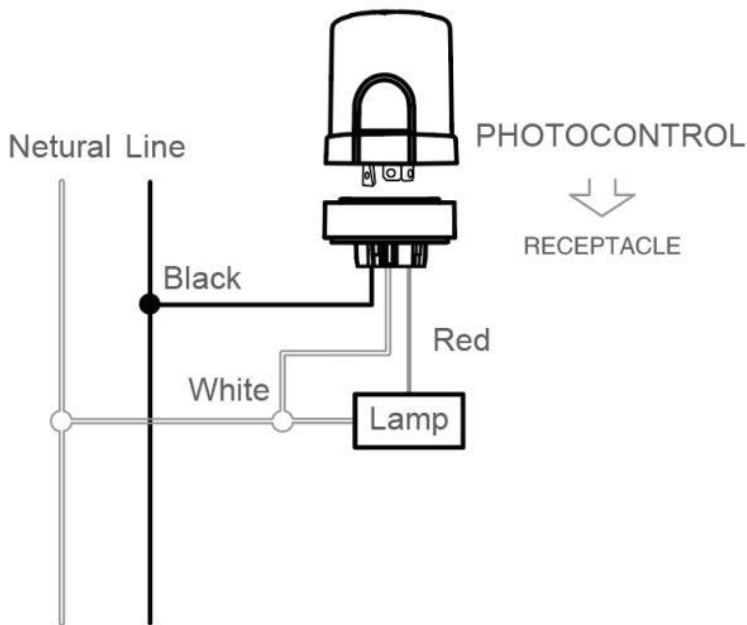
Model No.	JL-236CG
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Wireless Communication (up)	LTE-Cat1
Wireless Communication (down)	Zigbee
Spectral Acquisition Range	350~1100nm ; Peak wavelength: 590nm
Rated Loading	1000W Tungsten, 1000VA Ballast 8A e-Ballast @120VAC/5A e-Ballast @208-277VAC
Power Consumption	2.4W Max.
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell Material	PC+PC
Optional High Protection	Double Shell
Surge protection level	6KV/3KA
IP level	IP65 / IP67
Factory settings	Remote control+Adaptive mode

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- The Photocontrol turns off immediately when initially installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

JL-241/242/243

Smart Dimming Photocontrol



Product Summary

The dimming photocontrol JL-241/242/243 series is applicable to control the dimmable LED street lighting (0~10V) automatically in accordance with the ambient natural lighting level.

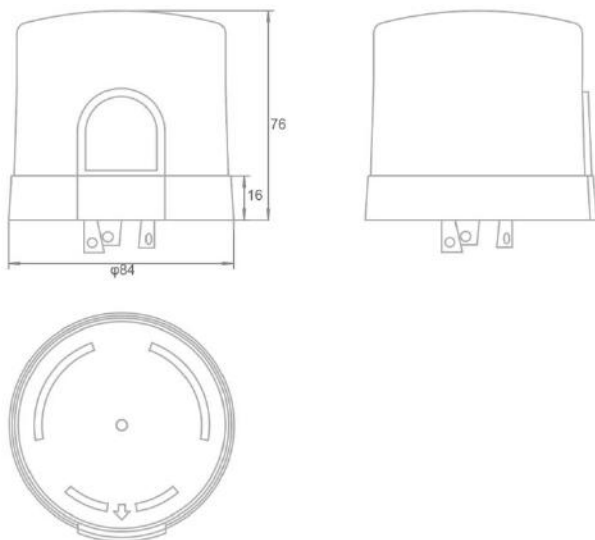
This product is designed with microprocessor circuits with IR-filtered phototransistor.

A heavy duty surge arrester (MOV) is provided to protect the lamp from inrush current as well as impulse by lightening.

Further, a preset 10 seconds time-delay prevents excessive operation due to spotlight or lightning during the night time.

It provides constant reliability as the relay has sufficient work life of over 10,000 cycles, and offers extra long work life when a sandwich cover option is applied together.

This product provides twist lock terminals meeting the requirements of ANSI C136.41 as well as being listed by UL under the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



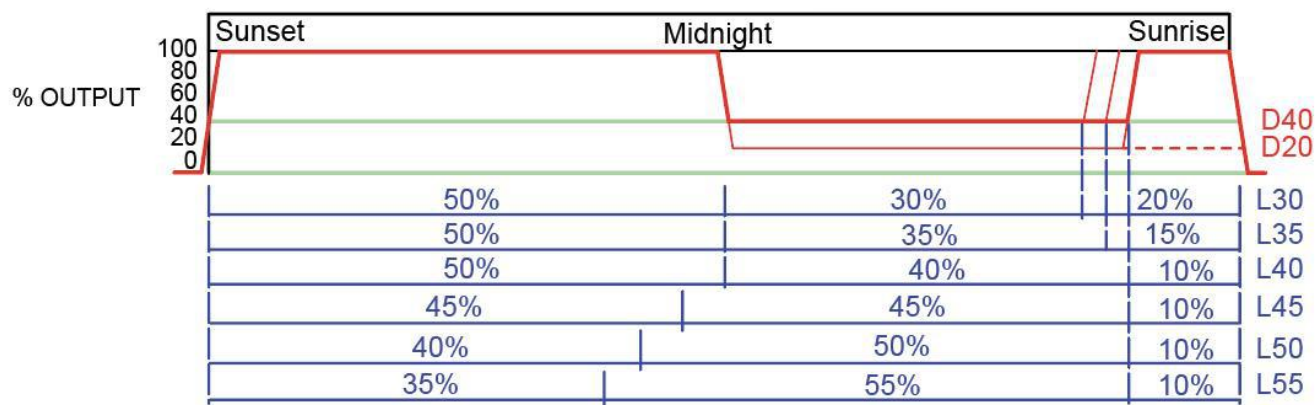
Features

- ANSI C136.41 Twist-lock
- 0~10V Dimming
- Surge protection level: 6KV/3KA differential mode
- Optional Sandwich cover for Long Life
- Multi-Volts Application
- IP65 Ready / IP67 Optional
- IR-filtered Phototransistor
- Constant On/Off Dimming
- Midnight Dimming (JL-242、JL-243)
- LED Decay Compensation (JL-243)

Constant On/Off Dimming Standard program for LED output keeping the field lit with constant lighting level, in accordance with the natural sunlight level detected. When the natural lighting is higher than 110% of the rated level, hot line will be disconnected to keep LED fixture as zero consumption



Midnight Dimming Standard program for LED output lowered to a customized percentage to save power after midnight until about 1 hour before dawn time, as well as reduce light pollution to environment. (Calculation method of night length: Moving average of night length in the first eight days)



LED Decay Compensation Standard program for LED output partially reserved and to be used for compensating decay over a work time up to 13 years. It will extend the work life of a LED fixture

significantly.

Available JL-243C only.

Model	JL-241C	JL-242C	JL-243C
Constant On/Off Dimming	●	●	●
Midnight Dimming	x	●	●
LED Decay Compensation	x	x	●

Specifications

Model No.	JL-241/242/243C	JL-241/242/243E	JL-241/242/243F
Rated Voltage	120~277VAC	347VAC	480VAC
Applicable Voltage Range	105~305VAC	105~382VAC	105~528VAC
Rated Frequency	50/60Hz		
Dimming Output	0~10V DC		
Spectral Acquisition Range	350~1100nm ; Peak wavelength: 590nm		
Rated Loading	1000W Tungsten, 1800VA Ballast, 8A@120VAC/5A@208- 277VAC e-Ballast	1800W Tungsten, 1800VA Ballast, 5A@208-277VAC e-Ballast	1800W Tungsten, 1800VA Ballast
Operate Levels	Turn-On < 100Lx, Turn-Off > 100Lx / per client request		
Typical Time Delay	5s		
Ambient Temperature	-40°C ~ +70 °C		
Related Humidity	96%		
Fail Mode	Fail-On		
Shell material	PC+PC		
High protection	Sandwich cover (optional)		
Surge protection	640 Joule / 40kA Amp MYL1-40K511	640 Joule / 40kA Amp MYL1-40K911	

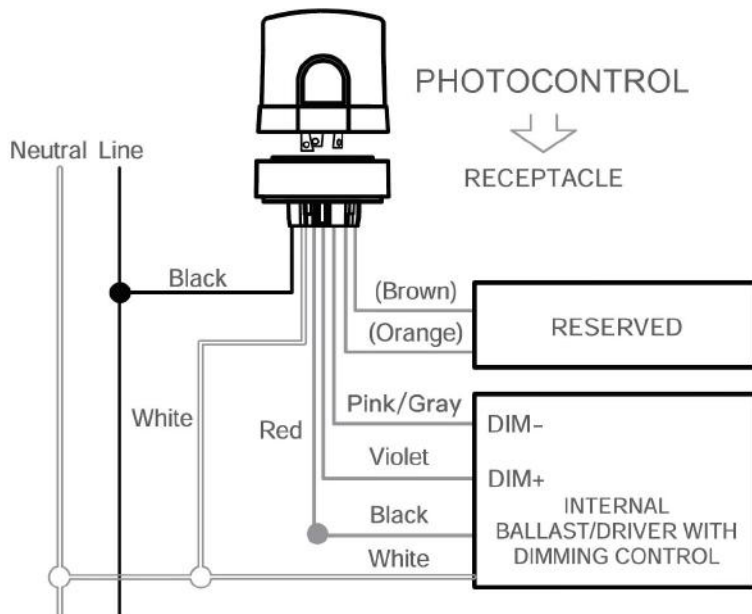
IP level	IP65/IP67	
Factory settings	Illuminance/Delayed Customizable	Illuminance/Delayed/Reduction Duration Customizable
Certifications	  	

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- The Photocontrol turns off immediately when initially installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-241C 4 P F -IP67

	1	2	3	4	5
JL-241	C	4	P	F	IP67

1: C=120-277VAC

E=347VAC

F=480VAC

2: 4 = Fail-Off

5 = Fail-On

3: P = PP cover

K = PC+PC sandwich cover

4: F = Blue

Customizable

5: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP67 = Full Silicon sealant +Silicon gasket

JL-242C 4 P F -IP67 (100-05-D50-L40)

1	2	3	4	5	6	7	8	9	10
JL-242	C	4	P	F	IP67	100	05	D50	L40

1: JL-242

JL-243

2: C=120-277VAC

E=347VAC

F=480VAC

3: 4 = Fail-Off

5 = Fail-On

4: P = PP cover

K = PC+PC sandwich cover

5: F = Blue

Customizable

6: IP67 = Full Silicon sealant + Silicon gasket

IP65 = Silicon sealant + Thermalplastic Elastomer gasket

7: Constant On/Off Level: XXX, in Lux

8: Time Delay: XX, in second

9: Dimming Percentage: DXX

10: Dimming Period: LXX

JL-245CG (LTE-Cat1 edition)

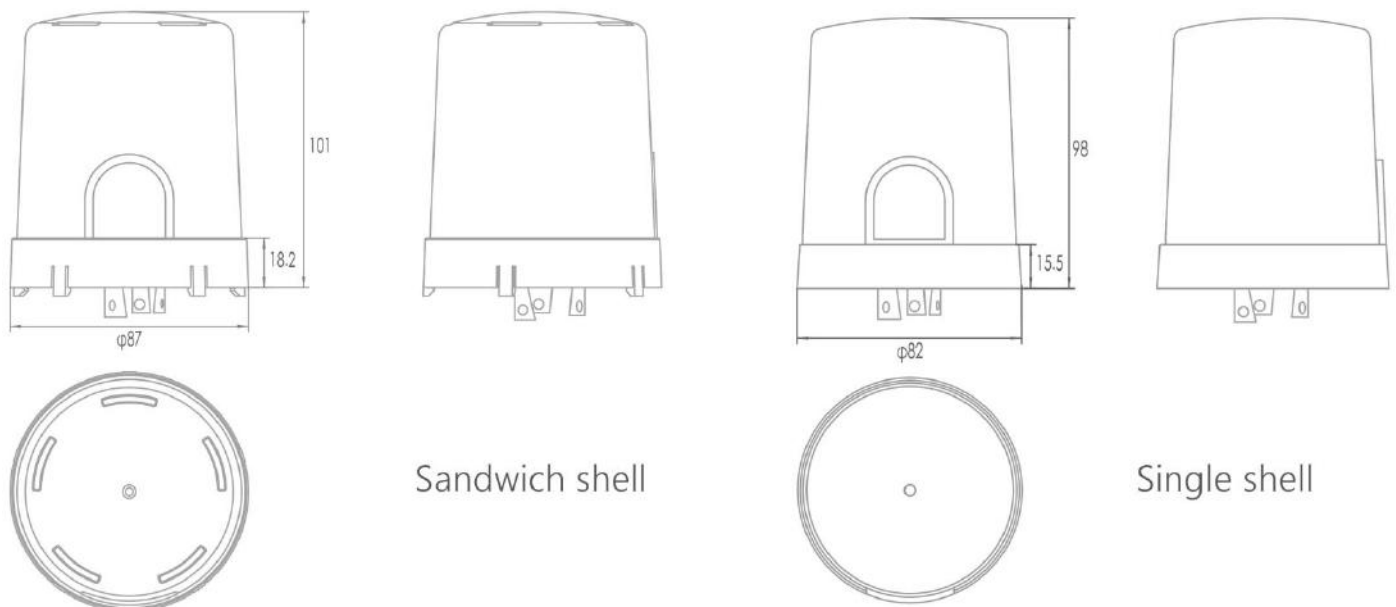
Smart IoT Dimming Photocontrol



Product Summary

JL-245CG photocontrol can apply to independent control application or system control application, such as roads, exhibitions, schools, shopping malls, supermarkets, factories, parks and so on.

This product consists a LTE-Cat1 wireless communication module to allow its remoted with a smart IoT management system.



Features

- ANSI C136.41 Twist-lock
- 0~10V Dimming
- Surge protection level: 6KV/3KA differential mode

- Sandwich cover for Long Life
- Multi-Volts Application
- IP67 Ready
- IR-filtered Phototransistor

Specifications

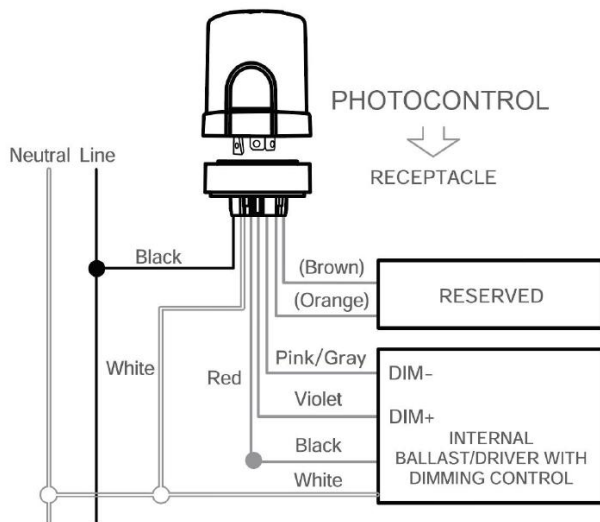
Model No.	JL-245CG
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Dimming Output	0~10VDC
Wireless Communication (up)	LTE-Cat1
Wireless Communicatio (down)	LTE-Cat1
Spectral Acquisition Range	350~1100nm; Peak wavelength 590nm
Rated Loading	1000W Tungsten ,1000VA Ballast , 8A@120VAC/5A@208-277VAC e-Ballast
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Power Consumption	1.2W static, 2.4W dynamic
Ambient Temperature	-40°C~70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell material	PC
Surge protection level	6KV/3KA differential mode
IP level	IP67
Factory Settings	Remote control+Adaptive mode

Certifications	  
Criterion	IEC61000-4-5;IEC61000-4-2;IEC61000-4-3; IEC61000-4-6;GB/T 17743-2017;IEC61000-4-4; IEC61000-4-11;IEC61000-3-2;GB/T2423.10-2008;UL94-V0;

Installation

The interface of the product itself has been mistake-proof designed, just tighten the photocontrol directly to the rotatable/fixed base, as shown in Figure clockwise after insertion.

- Hot-swappable
- Users can input the photocontrol ID information to the smart lighting management system through WEB interface or by scanning QR code with its specific WeChat "UM9900 Smart Light Pole" public account.



Initial Testing

- It is normal for the photocontrol to take several seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

JL-245CG 06 F -IP67

1	2	3	IP67
JL-245CG	06	F	

1: LTE-Cat1 wireless communication module, SIM card slot offered

2: 06 = 6KV lightning protection;

3: Enclosure color

F = Blue; H = Black; K = Gray

JL-245CN

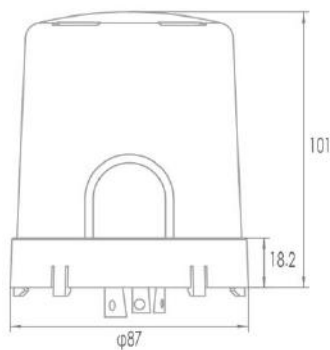
Smart IoT Dimming Photocontrol



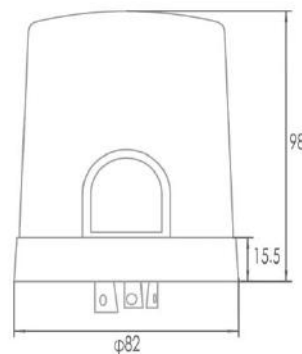
Product Summary

JL-245CN photocontrol can apply to independent control application or system control application, such as roads, exhibitions, schools, shopping malls, supermarkets, factories, parks and so on.

This product consists a NB-IoT communication module to allow its remoted with a smart IoT management system.



Sandwich shell



Single shell

Features

- ANSI C136.41 Twist-lock
- 0~10V Dimming
- Surge protection level: 6KV/3KA differential mode

- Sandwich cover for Long Life
- Multi-Volts Application
- IP67 Ready
- IR-filtered Phototransistor

Specifications

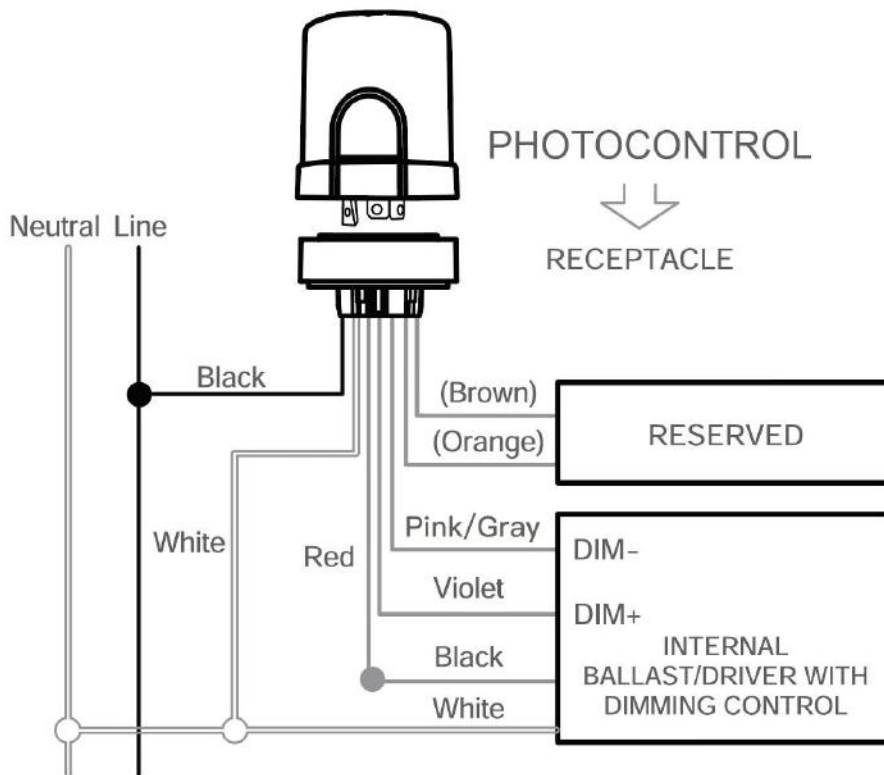
Model No.	JL-245CN
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Dimming Output	0~10VDC
Wireless Communication (up)	NB-IoT
Spectral Acquisition Range	350~1100nm;Peak wavelength 590nm
Rated Loading	1000W Tungsten,1000VA Ballast,8A@120VAC/5A@208-277VAC e-Ballast
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Power Consumption	1.2W static, 2.4W dynamic
Ambient Temperature	-40°C~70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell material	PC
Surge protection level	6KV/3KA differential mode
IP level	IP67
Factory Settings	Remote control+Adaptive mode
Certifications	  

Criterion	IEC61000-4-5; IEC61000-4-2; IEC61000-4-3; IEC61000-4-6; GB/T 17743-2017; IEC61000-4-4; IEC61000-4-11; IEC61000-3-2; GB/T2423.10-2008; UL94-V0;
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Installation

The interface of the product itself has been mistake-proof designed, just tighten the photocontrol directly to the rotatable/fixed base, as shown in Figure clockwise after insertion.

- Hot-swappable
- Users can input the photocontrol ID information to the smart lighting management system through WEB interface or by scanning QR code with its specific WeChat "UM9900 Smart Light Pole" public account.



Initial Testing

- It is normal for the photocontrol to take several seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

JL-245CN 06 F -IP67

1	2	3	
JL-245CN	06	F	IP67

1: NB-IoT module, SIM card slot offered

2: 06 = 6KV lightning protection;

3: Enclosure color

F = Blue; H = Black; K = Gray

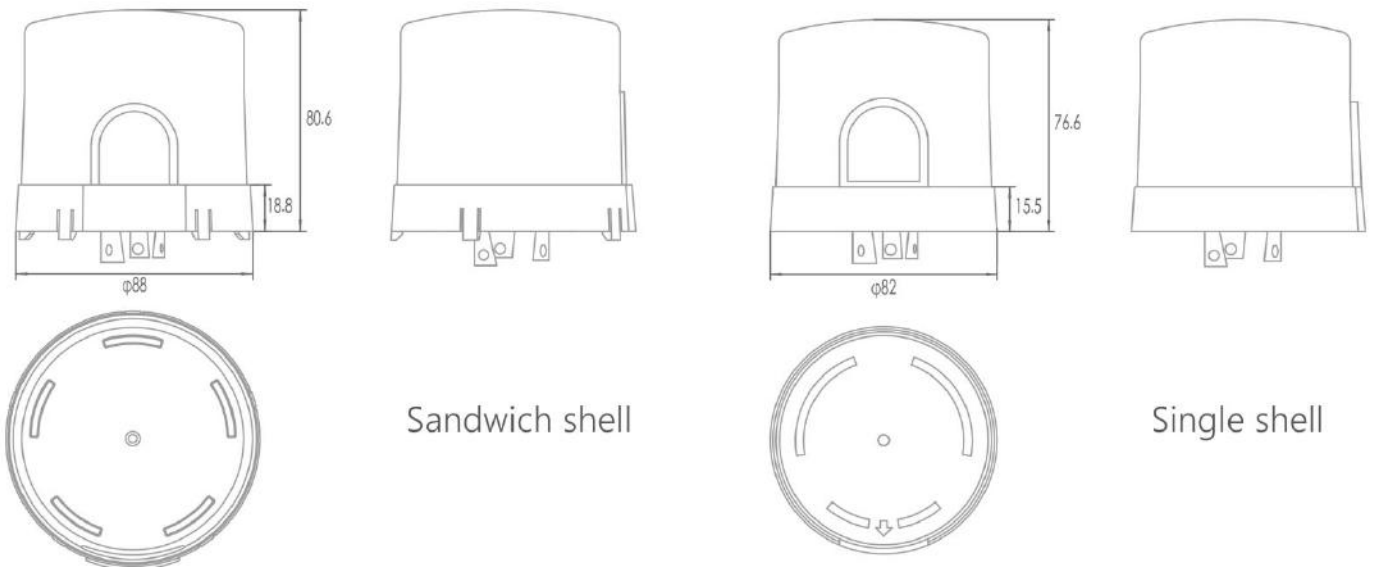
JL-245CZ

Smart IoT Dimming Photocontrol



Product Summary

JL-245CZ photocontrol can apply to independent control application or system control application, such as roads, exhibitions, schools, shopping malls, supermarkets, factories, parks and so on. This product consists a Zigbee communication module to allow its remoted with a smart IoT management system.



Features

- ANSI C136.41 Twist-lock
- 0~10V Dimming
- Surge protection level: 6KV/3KA differential mode
- Sandwich cover for Long Life
- Multi-Volts Application

- IP67 Ready
- IR-filtered Phototransistor

Specifications

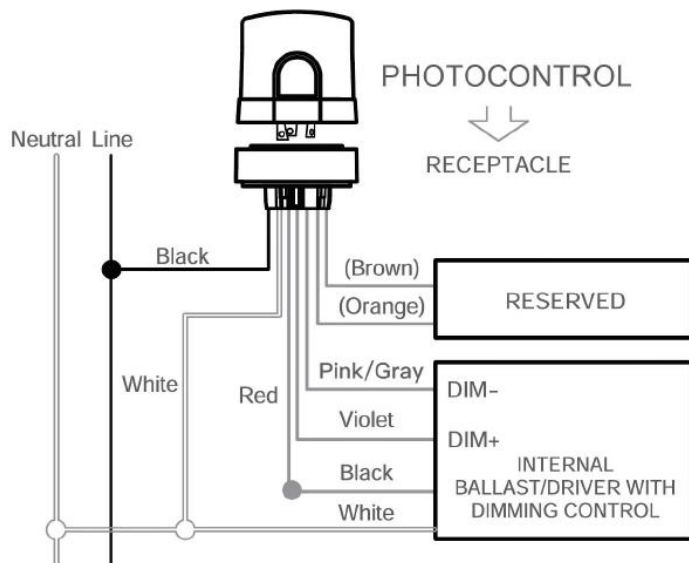
Model No.	JL-245CZ
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Dimming Output	0~10VDC
Wireless Communication (up)	Zigbee
Wireless Communicatio (down)	Zigbee
Spectral Acquisition Range	350~1100nm; Peak wavelength 590nm
Rated Loading	1000W Tungsten,1000VA Ballast,8A@120VAC/5A@208-277VAC e-Ballast
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Power Consumption	1.2W static, 2.4W dynamic
Ambient Temperature	-40°C~70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell material	PC
High protection	Double Shell
Surge protection level	6KV/3KA differential mode
IP level	IP67
Factory Settings	Remote control+Adaptive mode

Certifications	  
Criterion	IEC61000-4-5; IEC61000-4-2; IEC61000-4-3; IEC61000-4-6; GB/T 17743-2017; IEC61000-4-4; IEC61000-4-11; IEC61000-3-2; GB/T2423.10-2008; UL94-V0;

Installation

The interface of the product itself has been mistake-proof designed, just tighten the photocontrol directly to the rotatable/fixed base, as shown in Figure clockwise after insertion.

- Hot-swappable
- Users can input the photocontrol ID information to the smart lighting management system through WEB interface or by scanning QR code with its specific WeChat "UM9900 Smart Light Pole" public account.



Initial Testing

- It is normal for the photocontrol to take several seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

JL-245CZ 06 F -IP67

1	2	3	
JL-245CZ	06	F	IP67

1: Zigbee module, SIM card slot offered

2: 06 = 6KV lightning protection;

3: Enclosure color

F = Blue; H = Black; K = Gray

JL-246CG

Smart IoT Dimming Photocontrol

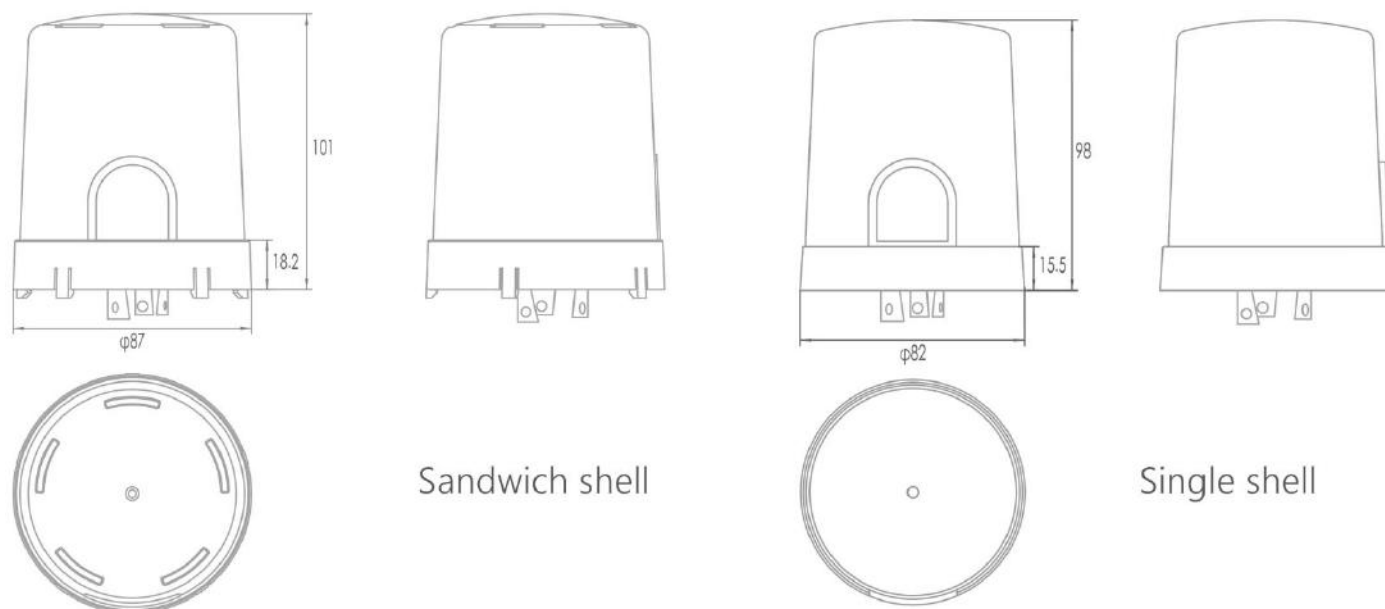
With LTE Gateway / Collector



Product Summary

JL-246CG photocontrol can apply to independent control application or system control application, such as roads, exhibitions, schools, shopping malls, supermarkets, factories, parks and so on.

This product consists a Zigbee communication module as well as a LTE communication module to allow its Zigbee group remoted with a smart IoT management system.



Features

- ANSI C136.41 Twist-lock
- 0~10V Dimming
- Surge protection level: 6KV/3KA differential mode

- Sandwich cover for Long Life
- Multi-Volts Application
- IP67 Ready
- IR-filtered Phototransistor

Specifications

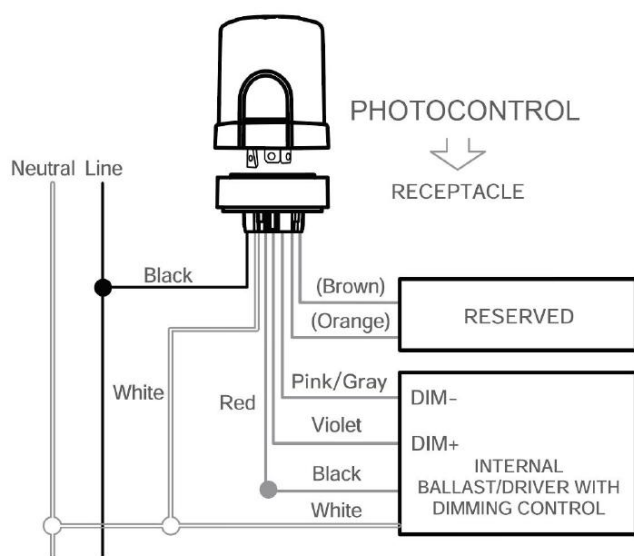
Model No.	JL-246CG
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Dimming Output	0~10VDC
Wireless Communication (up)	LTE-Cat1
Wireless Communication (down)	Zigbee
Spectral Acquisition Range	350~1100nm; Peak wavelength 590nm
Rated Loading	1000W Tungsten,1000VA Ballast,8A@120VAC/5A@208-277VAC e-Ballast
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Power Consumption	1.2W static, 10W dynamic
Ambient Temperature	-40°C~70°C
Related Humidity	96%
Fail Mode	Fail-On
Shell material	PC+PC
High protection	Double Shell
Surge protection level	6KV/3KA differential mode

IP level	IP54/IP65/IP67
Factory Settings	Remote control+Adaptive mode
FCC	●
Certifications	  
Criterion	IEC61000-4-5; IEC61000-4-2; IEC61000-4-3, IEC61000-4-6; GB/T 17743-2017; IEC61000-4-4; IEC61000-4-11; IEC61000-3-2; GB/T2423.10-2008; UL94-V0;

Installation

The interface of the product itself has been mistake-proof designed, just tighten the photocontrol directly to the rotatable/fixed base, as shown in Figure clockwise after insertion.

- Hot-swappable
- Users can input the photocontrol ID information to the smart lighting management system through WEB interface or by scanning QR code with its specific WeChat "UM9900 Smart Light Pole" public account.



Initial Testing

- It is normal for the photocontrol to take several seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.

- Test will take approximately 2 minutes.

JL-246CG 06 F -IP67

1	2	3	
JL-246CG	06	F	IP67

1: LTE SIM card slot offered

2: 06 = 6KV lightning protection;

3: Enclosure color

F = Blue; H = Black; K = Gray

JL-246CR

Smart IoT Dimming Photocontrol

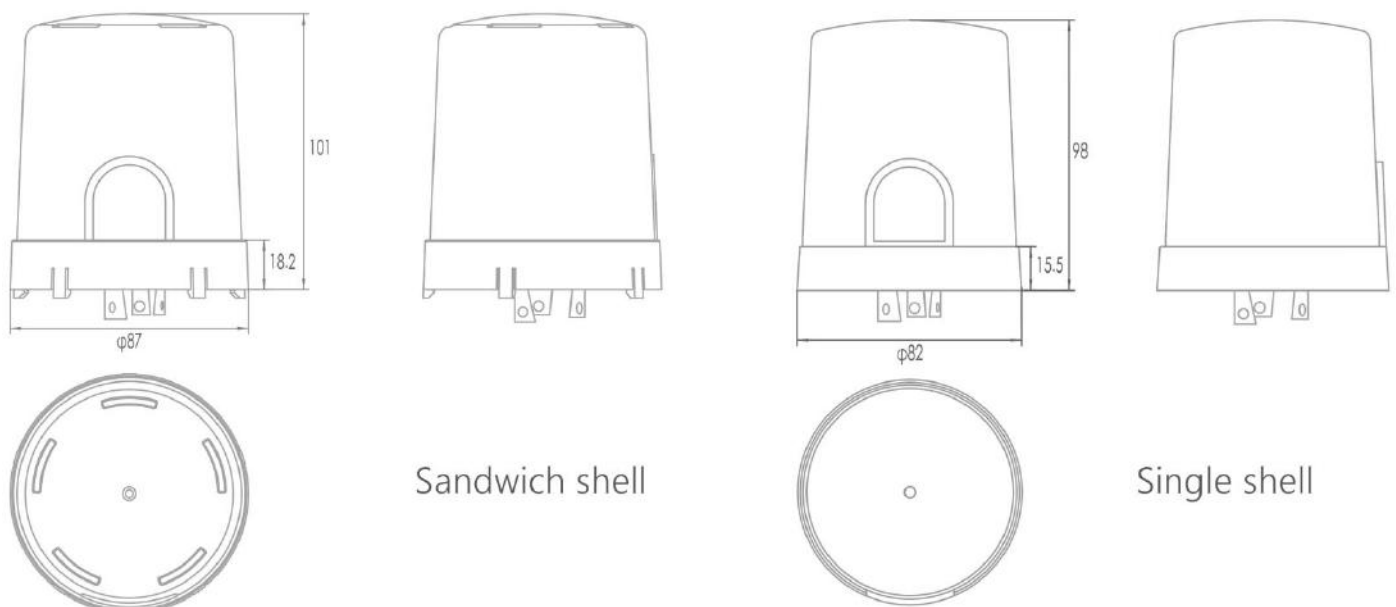
With RS485 Gateway / Collector



Product Summary

JL-246CR photocontrol can apply to independent control application or system control application, such as roads, exhibitions, schools, shopping malls, supermarkets, factories, parks and so on.

This product consists a ZigBee communication module as well as a RS485 communication module to allow its ZigBee group remoted with a smart IoT management system.



Features

- ANSI C136.41 Twist-lock
- 0~10V Dimming

- Surge protection level: 6KV/3KA differential mode
- Sandwich cover for Long Life
- Multi-Volts Application
- IP67 Ready
- IR-fiRS485red Phototransistor

Specifications

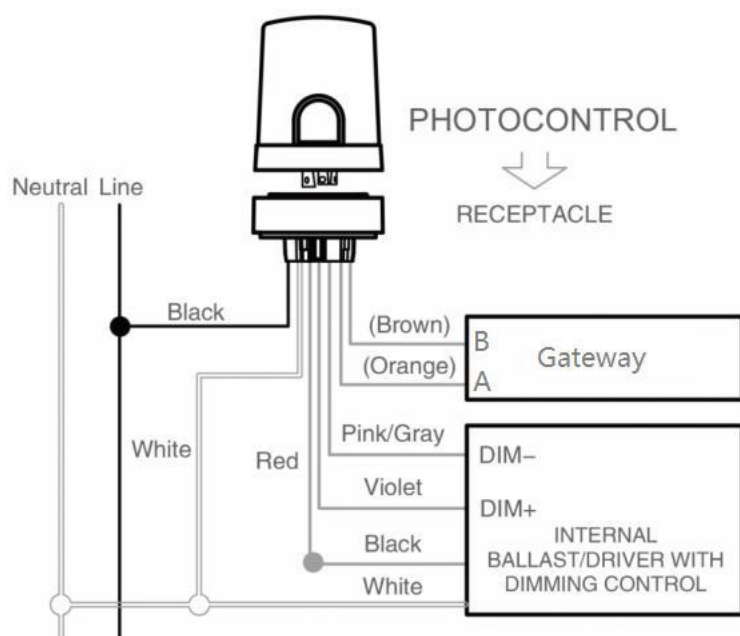
Model No.	JL-246CR
Rated Voltage	120~277VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Dimming Output	0~10VDC
Wireless Communication (up)	RS485
Wireless Communicatio (down)	Zigbee
Spectral Acquisition Range	350~1100nm; Peak wavelength 590nm
Rated Loading	1000W Tungsten ; 1000VA Ballast ; 8A@120V 5A@208-277 e-Ballast
Operate Levels	Turn-On < 100Lx, Turn-Off > 150Lx / per client request
Power Consumption	1.2W static, 3.4W dynamic
Operating Temperature	-40°C~70°C
Operating Humidity	96%
Failure mode	Fail-On
Shell material	PC+PC
High protection	Double Shell

Surge protection level	6KV/3KA differential mode
IP level	IP65/IP67
Factory Settings	Remote control+Adaptive mode
FCC	●
Certifications	  
Criterion	IEC61000-4-5;IEC61000-4-2;IEC61000-4-3; IEC61000-4-6;GB/T 17743-2017;IEC61000-4-4; IEC61000-4-11;IEC61000-3-2;GB/T2423.10-2008; UL94-V0;

Installation

The interface of the product itself has been mistake-proof designed, just tighten the photocontrol directly to the rotatable/fixed base, as shown in Figure clockwise after insertion.

- Hot-swappable
- Users can input the photocontrol ID information to the smart lighting management system through WEB interface or by scanning QR code with its specific WeChat "UM9900 Smart Light Pole" public account.



Initial Testing

- It is normal for the photocontrol to take several seconds to turn off when first installed.

- To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

JL-246CR 06 F -IP67

1	2	3	IP67
JL-246CR	06	F	

1: RS485

2: 06 = 6KV lightning protection;

3: Enclosure color

F = Blue; H = Black; K = Gray

JL-251/252/253

Twist-Lock Intelligent Photocontrol



Product Summary

The dimming photocontrol JL-251/252/253 series is applicable to control the dimmable LED street lighting (0~10V) automatically in accordance with the ambient natural lighting level.

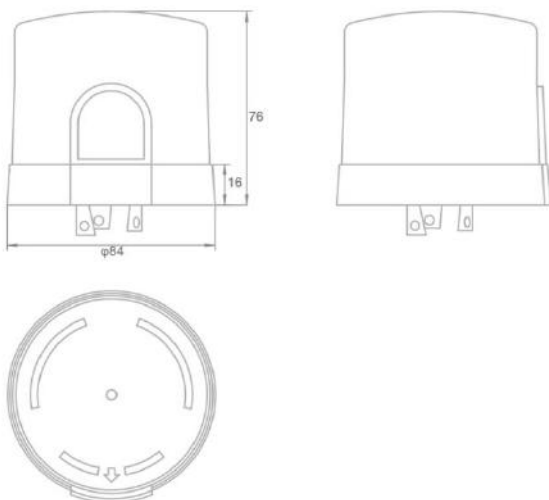
This product is designed with microprocessor circuits with IR-filtered phototransistor.

A heavy duty surge arrester (MOV) is provided to protect the lamp from inrush current as well as impulse by lightening.

Further, a preset 10 seconds time-delay prevents excessive operation due to spotlight or lightning during the night time.

It provides constant reliability as the relay has sufficient work life of over 10,000 cycles, and offers extra long work life when a sandwich cover option is applied together.

This product provides twist lock terminals meeting the requirements of ANSI C136.41 as well as being listed by UL under the Standard for Plug-In, Locking Type Photocontrols for Use with Area Lighting ANSI/UL773.



Features

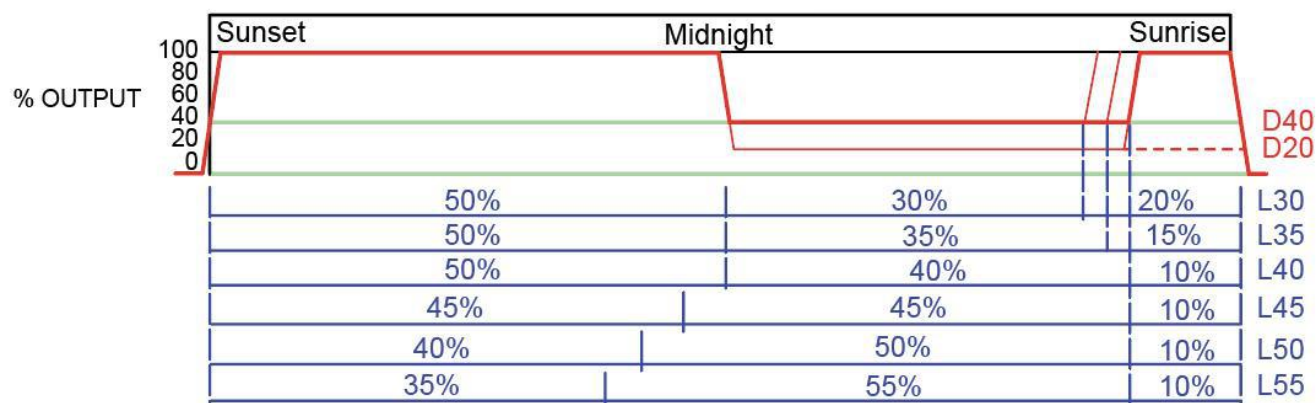
- ANSI C136.41 Twist-lock
- DALI Dimming
- MOV 40kA Surge Arrester Built-in
- Optional Sandwich cover for Long Life
- Multi-Volts Application
- IP65 Ready / IP67 Optional
- IR-filtered Phototransistor
- Constant On/Off Dimming
- Midnight Dimming (JL-252、JL-253)
- LED Decay Compensation (JL-253)

Sequence diagram

Constant On/Off Dimming Standard program for LED output keeping the field lit with constant lighting level, in accordance with the natural sunlight level detected. When the natural lighting is higher than 110% of the rated level, hot line will be disconnected to keep LED fixture as zero consumption



Midnight Dimming Standard program for LED output lowered to a customized percentage to save power after midnight until about 1 hour before dawn time, as well as reduce light pollution to environment. (Calculation method of night length: Moving average of night length in the first eight days)



Note: The mid night dimming function is only applicable to JL-252C and JL-253C

Specifications

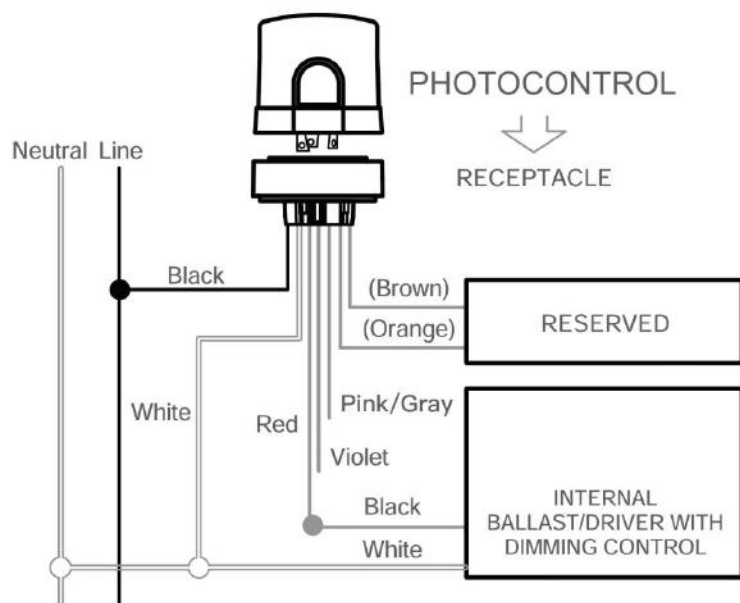
Model No.	JL-251C	JL-252C	JL-253C
Rated Voltage	120~277VAC		
Applicable Voltage Range	105~305VAC		
Rated frequency	50/60Hz		
Dimming Output	DALI		
Spectral Acquisition Range	350~1100nm; Peak wavelength 590nm		
Rated Loading	1000W Tungsten, 1800VA Ballast, 8A e-Ballast @120VAC/ 5A e-Ballast @208-277VAC		
Operate Levels	Turn-On < 100Lx, Turn-Off > 100Lx / per client request		
Typical Time Delay	5s		
Ambient Temperature	-40°C ~ +70 °C		
Related Humidity	96%		
Fail Mode	Fail-On		
Shell material	PC+PC		
High protection	Double Shell		
Lightning Protection	4KV/2KA		
Surge protection	MYL1-40K511		
IP level	IP67		
Factory Settings	Illuminance/Delayed Customizable	Illuminance/Delayed/Reduction Duration Customizable	
Certifications			

Installation

Disconnect power; wire the color coded receptacle according to the diagram below.

Push the photocontrol on and twist it clockwise to lock it into the receptacle.

Adjust the receptacle position if necessary, to ensure the Photocell facing the NORTH direction as indicated on the top of the photocontrol.



Initial Testing

- The Photocontrol turns off immediately when initially installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the Photocontrol off.
- photocontrol test will take approximately 2 minutes.

* Operation of this Photocontrol is not affected by weather, moisture or temperature changes.

Ordering Information

JL-251C 4 P F -IP67

	1	2	3	4	5
JL-251	C	4	P	F	IP67

1: C=120-277VAC

E=347VAC

F=480VAC

2: 4 = Fail-Off

5 = Fail-On

3: P = PP cover

K = PC+PC sandwich cover

4: F = Blue

Customizable

5: IP65 = Silicon sealant + Thermalplastic Elastomer gasket

IP67 = Full Silicon sealant +Silicon gasket

JL-252C 4 P F -IP67 (100-05-D50-L40)

1	2	3	4	5	6	7	8	9	10
JL-252	C	4	P	F	IP67	100	05	D50	L40

1: JL-252

JL-253

2: C=120-277VAC

E=347VAC

F=480VAC

3: 4 = Fail-Off

5 = Fail-On

4: P = PP cover

K = PC+PC sandwich cover

5: F = Blue

Customizable

6: IP67 = Full Silicon sealant +Silicon gasket

IP65 = Silicon sealant + Thermalplastic Elastomer gasket

7: Constant On/Off Level: XXX, in Lux

8: Time Delay: XX, in second

9: Dimming Percentage: DXX

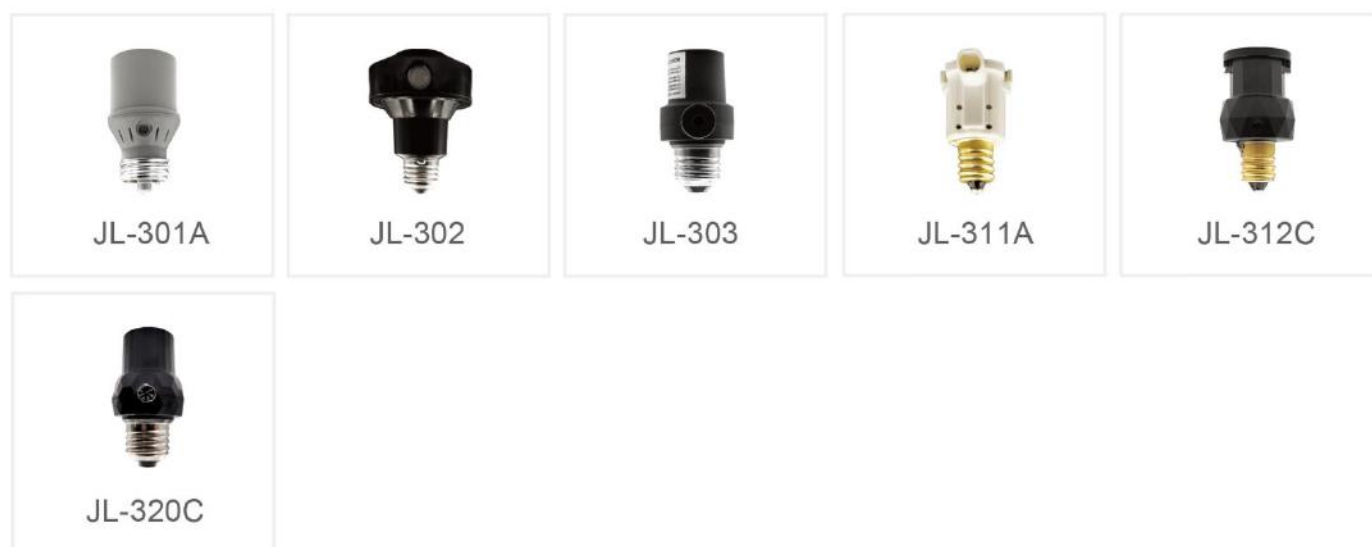
10: Dimming Period: LXX

JL-3 Screw in, make your bulb smart.

The series of JL-3 is the screw-in type bulb holder control, intended to upgrade screw in bulbs to go automatic.

The JL-30X series is applicable for E26/E27 bulb holder and the JL-31X series is applicable for E12 bulb holder.

The photo sensing bulb holder is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level. This product is designed on the basis of electrical heating structure that provides time delay to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature. JL-301/311 is designed with electronic circuits with sensor of CdS.

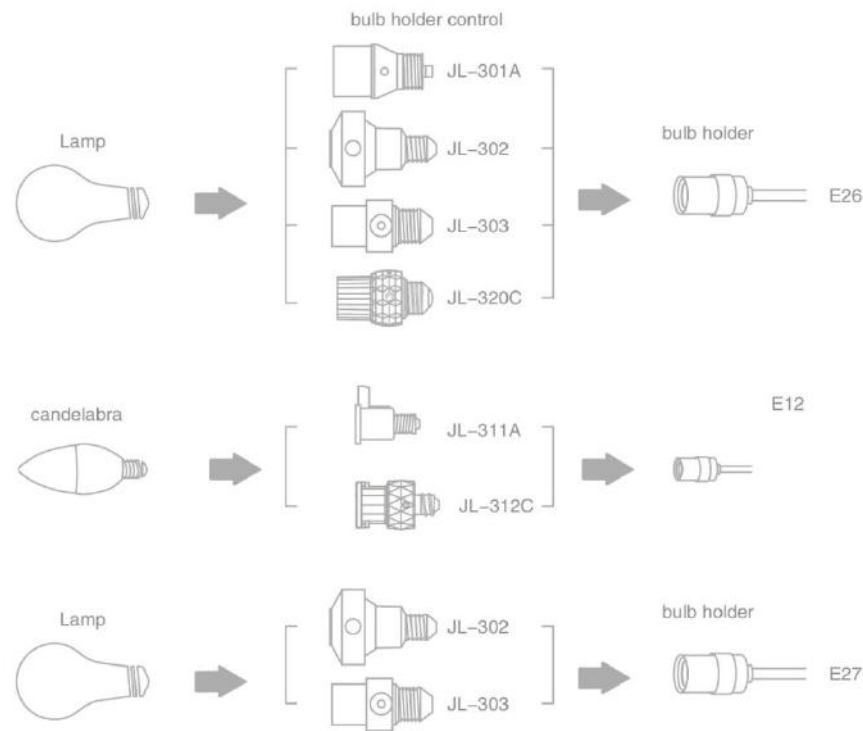


The Family

Model No.	Lamp Holder Type	Max Loading	Overall Dimension (L*W*H)	Sensor Type
JL-301A	E26	150W (Tungsten)	36.6*36.6*68	CdS
JL-302	E26/E27	150W (Tungsten / CFL / LED)	86*70*94	CdS
JL-303	E26/E27	150W (Tungsten / CFL / LED)	40.5*40.5*78	CdS
JL-311A	E12	75W (Tungsten)	34.5*22.3*38.3	CdS

JL-312C	E12	75W (Tungsten / CFL / LED)	24*24*40.5	Phototransist or
JL-320C	E26	150W (Tungsten / CFL / LED)	43.2*43.2*72.2	Phototransist or

Wiring Diagram

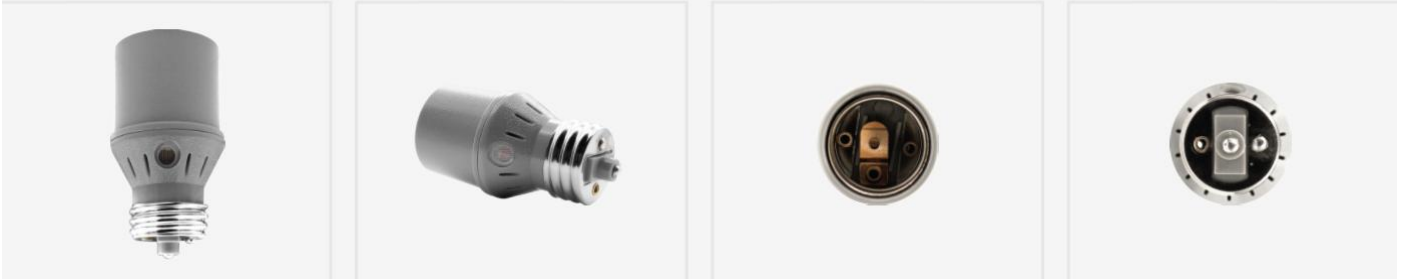


Trouble Shooting

- It is recommended to be installed by a licensed electrician. The installation and use of the equipment should be in accordance with the US National Electrical Code, local regulations and relevant industry standards.
- Check that the line voltage is consistent with the one shown on the bulb holder control label. To avoid fire, conflict, or death, turn off the power and route the circuit breaker or panel and test power off.
- Do not face the sensing eye to artificial light, such as from lamps, signs, street lights, directly. Do not face the sensing eye to the reflected light from the bulb it controls, otherwise it may cycle in night time.

JL-301A

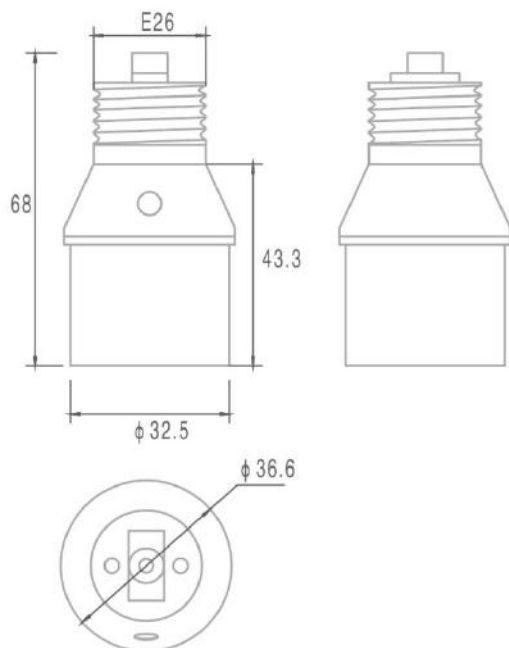
Bulb Holder control



Product Summary

The Bulb Holder control JL-301A series is applicable to control the garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level.

JL - 301A is recommend to work with Tungsten bulb only.



Features

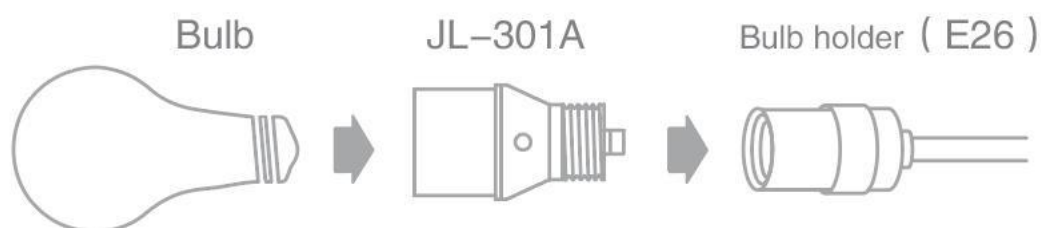
- Ambient Temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- Convenient and easy to install
- Improves security

Specifications

Model No.	JL-301A
Rated Voltage	120VAC
Rated Frequency	60Hz
Rated Loading	150W Tungsten
Power Consumption	0.5W Max.
Typical On/Off Level	20~40 Lx
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Failure Mode	Fail-Off
Adapter	E26
Certifications	  

Installation

- Disconnect power;
- Screw bulb off;
- Screw the unit into bulb holder completely.
- Screw bulb into the bulb holder of the unit.
- Connect power. Turn lamp switch ON.
- Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.
- Avoid to use the unit in an opaque or reflective glass lantern, as well as use in a wet place.



Initial testing

- It is normal for the Bulb Holder Control to take several minutes to turn off when first installed.
To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open. Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-301A H

JL-301A

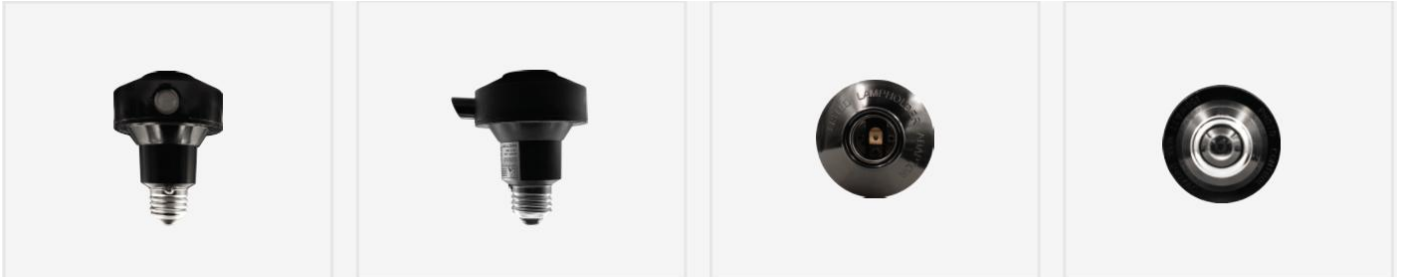
1
H

1: H=shell black

K=shell gray

JL-302

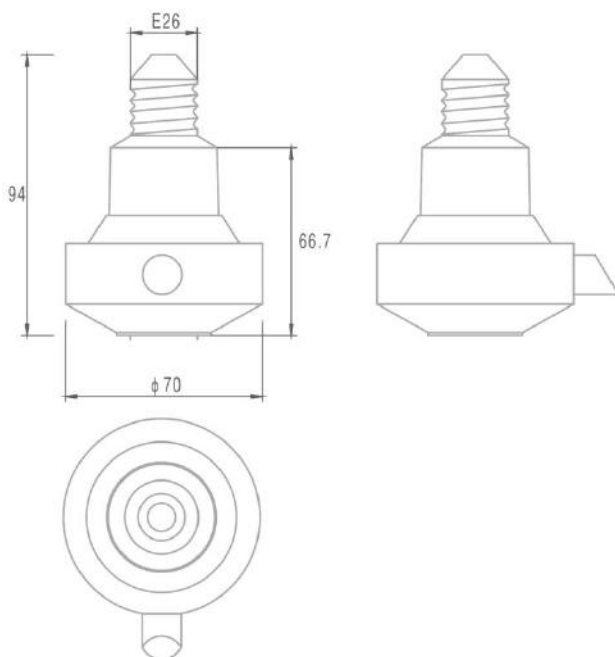
Bulb Holder control



Product Summary

The Bulb Holder control JL-302 series is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed on the basis of thermal switch that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.



Features

- Time Delay 20~120s
- Ambient Temperature: -40°C ~ +70°C
- Convenient and easy to install

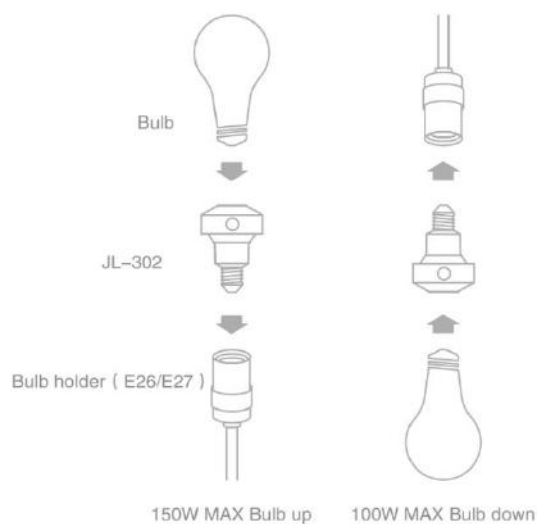
- Works on any type of lamp
- Improves security
- Supports CFL, LED bulbs also

Specifications

Model No.	JL-302A	JL-302B
Rated Voltage	120VAC	240VAC
Rated Frequency	60Hz	50/60Hz
Rated Loading	150W Tungsten	
Power Consumption	1.5W Max.	
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
UL File number	E346727	—
Adapter	E26	E27
Failure Mode	Fail-On	
Sunshade sleeve	●	
Certifications	  	 

Installation

- Disconnect power;
- Screw bulb off;
- Screw the unit into bulb holder completely.
- Screw bulb into the bulb holder of the unit.
- Connect power. Turn lamp switch ON.
- Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.
- Avoid to use the unit in an opaque or reflective glass lantern, as well as use in a wet place.



Initial testing

It is normal for the Bulb Holder Control to take several minutes to turn off when first installed. To test “turn on” during daytime, cover its eye with black tape or other opaque material.

Do not cover with finger because light traveling through fingers may be great enough to keep the switch open. Operation of this switch is not affected by weather, moisture or temperature changes. Test will take approximately 2 minutes.

Ordering Information

JL-302A H Y

JL-302	1	2	3
	A	H	Y

1: The Model Number

A=120VAC

B=240VAC

2: H=shell black

K=shell gray

N=shell bronze

3: Y=Lamp Holder Silvery

null= Lamp Holder Golden

JL-303

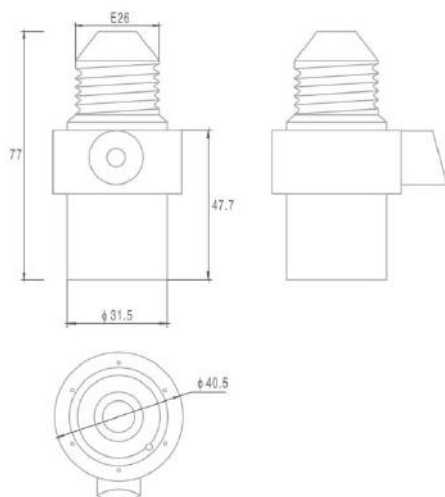
Bulb Holder control



Product Summary

The Bulb Holder control JL-303 is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed on the basis of electrical heating structure that provides time delay over 30 seconds to avoid redundant switching against spotlight or lightning during the night time. A temperature compensator system provides consistent performance regardless of the ambient temperature.



Features

- Time Delay 20~120s
- Ambient Temperature: -40°C ~ +70°C
- Convenient and easy to install
- Works on any type of lamp

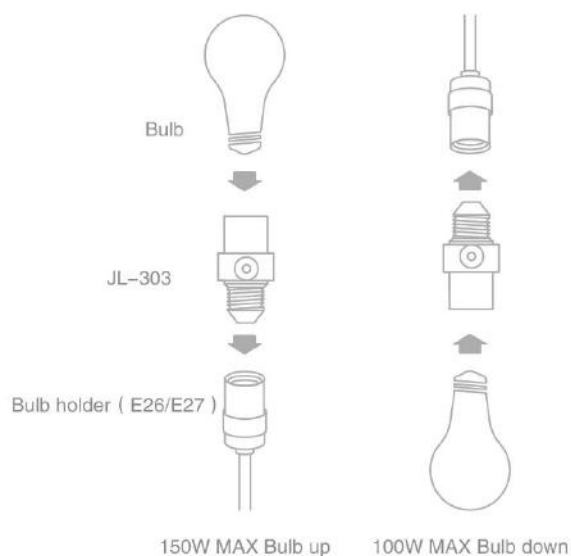
- Improves security
- Supports CFL, LED bulbs also

Specifications

Model No.	JL-303A	JL-303B
Rated Voltage	120VAC	240VAC
Rated Frequency	60Hz	50/60Hz
Rated Loading	150W Tungsten	
Power Consumption	1.5W Max.	
Operate Levels	10~20Lx Turn-On / 30~60Lx Turn-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
UL File number	E346727	—
Adapter	E26	E27
Failure Mode	Fail-On	
Sunshade sleeve	●	
Certifications	  	 

Installation

- Disconnect power;
- Screw bulb off;
- Screw the unit into bulb holder completely.
- Screw bulb into the bulb holder of the unit.
- Connect power. Turn lamp switch ON.
- Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.
- Avoid to use the unit in an opaque or reflective glass lantern, as well as use in a wet place.



Initial testing

- It is normal for the Bulb Holder Control to take several minutes to turn off when first installed. To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open. Operation of this switch is not affected by weather, moisture or temperature changes.
- Test will take approximately 2 minutes.

Ordering Information

JL-303A H Y

JL-303	1	2	3
	A	H	Y

1: A=120VAC

B=240VAC

2: H=shell black

K=shell gray

N=shell bronze

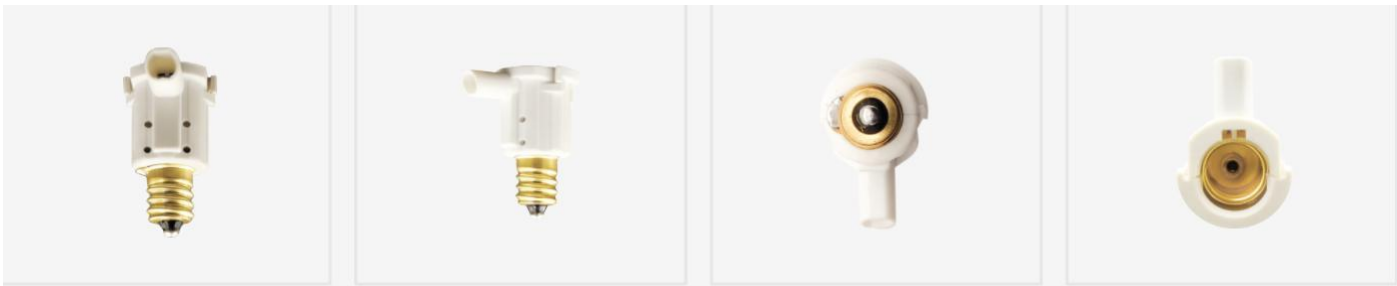
J=shell white

3: Y=Lamp Holder Silvery

null = Lamp Holder Golden

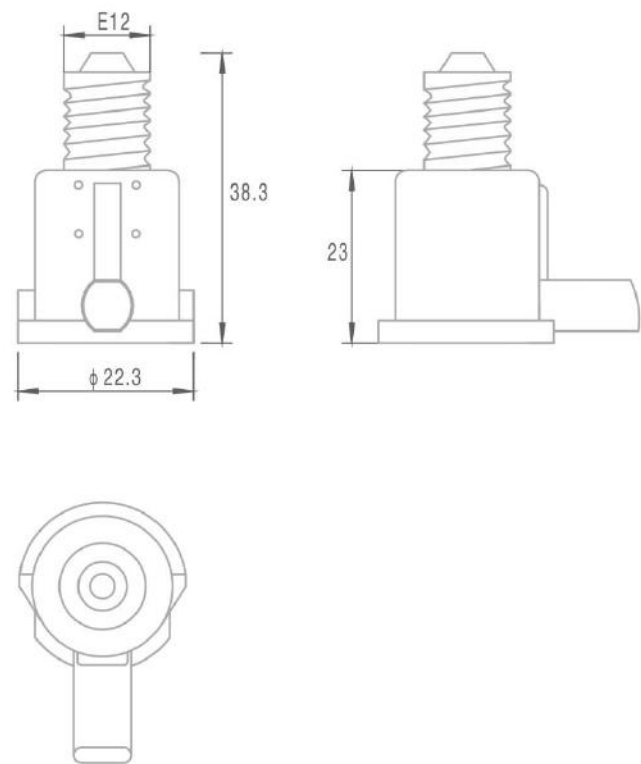
JL-311A

Bulb Holder Control(candelabra)



Product Summary

The bulb holder control JL-311A series is applicable to control the candelabra bulb automatically in accordance with the ambient natural lighting level.



Specifications

Model No.	JL-311A
Rated Voltage	120VAC

Rated Frequency	60Hz
Rated Loading	75W Tungsten Max
Power Consumption	0.5W Max.
Standard Operate Level	20~40 LX
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Adapter	E12
Failure Mode	Fail-Off
Sunshade sleeve	●
Certifications	  

Installation

- Disconnect power;
- Screw bulb off;
- Screw the unit into bulb holder completely.
- Screw bulb into the bulb holder of the unit.
- Connect power. Turn lamp switch ON.
- Do not install the switch with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.
- Avoid to use the unit in an opaque or reflective glass lantern, as well as use in a wet place.



Initial testing

- It is normal for the Bulb Holder Control to take several minutes to turn off when first installed. To test “turn on” during daytime, cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open. Operation of this switch is not affected by weather, moisture or temperature

changes.

Ordering Information

JL-311A Y

JL-311A

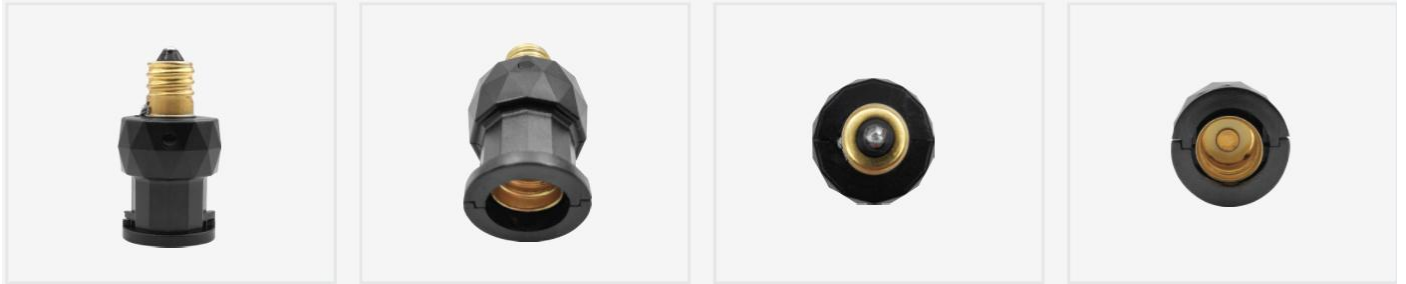
1
Y

1: Y=Lamp Holder Silvery

null = Lamp Holder Golden

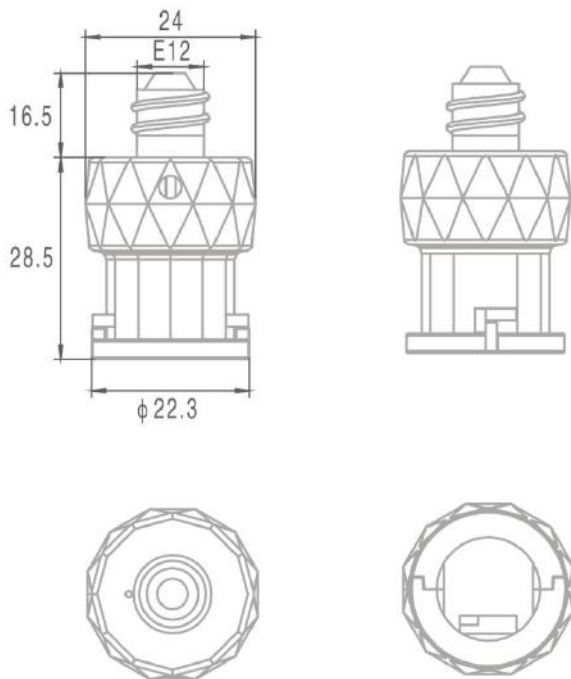
JL-312C

Bulb Holder Controller(candelabra)



Product Summary

The JL-312C light controller product is a smart light controller developed based on the E26 adaptor. It uses a light sensor to detect ambient light level, to switch the bulb automatically. It is applicable to work with CFL/LED bulbs also.



Features

- Multi-Volt applicable
- Standard E12 interface
- Self-sensing light switch

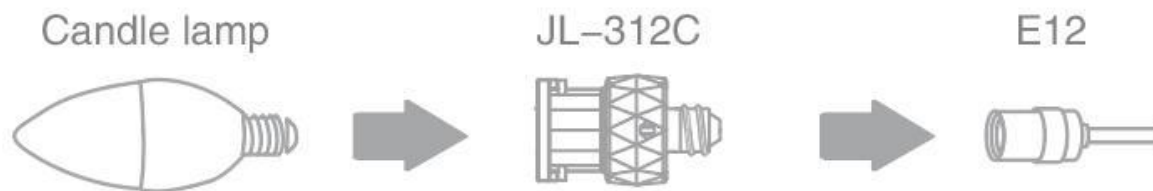
- Workable with CFL/LED

Specifications

Model No.	JL-312C
Rated Voltage	120VAC
Applicable Voltage Range	102~132VAC
Rated Frequency	50/60Hz
Rated Loading	60W Tungsten 0.5A e-Ballast
Power Consumption	0.2W Max.
Turn On Level	16Lx (±15) Natural light
Turn Off Level	64Lx (±15) Natural light
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Adapter	E12
Failure Mode	Fail-Off
Zero Crossing Control	Built-in
Certifications	 

Installation

- Disconnect power;
- Screw bulb off from E12 socket;
- Put the light control unit into the E12 socket, and then turn clockwise to tighten;
- Screw bulb into the bulb holder of the unit;
- Connect power; Turn lamp switch ON.
- Avoid to use the unit in an opaque or reflective glass lantern, as well as use in a wet place.



Initial testing

- Cover its eye with black tape or other opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch off.
- Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-312C H Y

JL-312C	1	2
	H	Y

1: Shell Color

H= black; K= gray; N= bronze; J= white

2: Y=Lamp Holder Silvery

null=Lamp Holder Golden

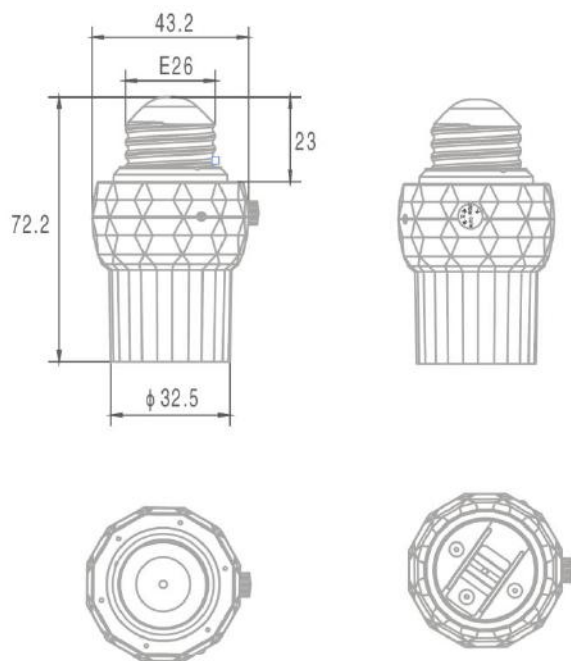
JL-320C

Programmable Bulb Holder Control



Product Summary

The JL-320C light controller product is a smart light controller developed based on the E26 adaptor. It uses a light sensor to detect ambient light level, to switch the bulb depends to user's setting with the rotating gear.



Features

- Wide voltage: 90-305VAC
- IR-filtered light sensor to prevent mis-operation
- E26 interface
- Small size
- Night watch - Dusk to Dawn

- Self-cycling prevention
- 2h/5h/8h/Random delayed-off setting gear

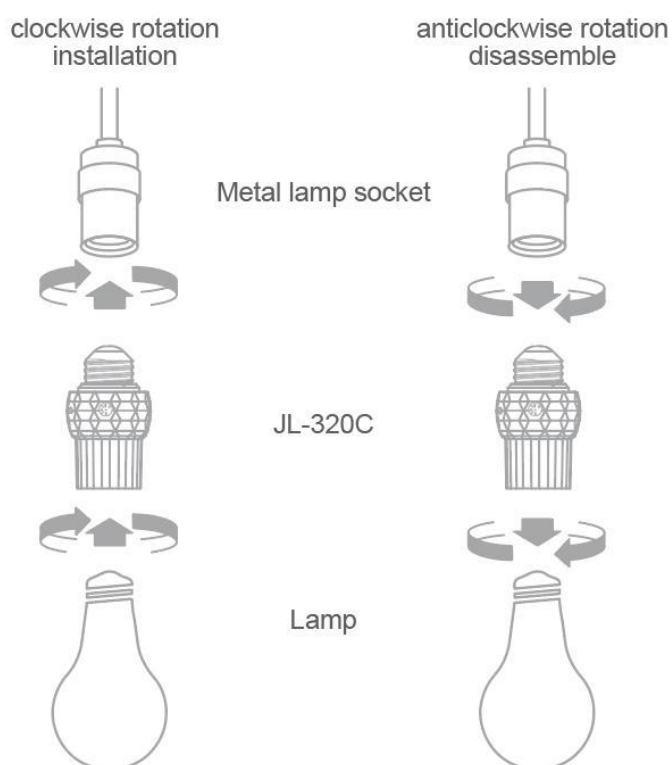
Specifications

Model No.	JL-320C
Rated Voltage	120VAC & 240VAC
Applicable Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Rated Loading	150W Tungsten 2A@120VAC e-Ballast 1A@240VAC e-Ballast
 6 functions	ON: Always On Auto: Turn On/Off according to ambient light level 2h: Keep On for 2 hours after turned on by auto 5h: Keep On for 5 hours after turned on by auto 8h: Keep On for 8 hours after turned on by auto RDM: Keep On for 2h/5h/8h randomly after turned on by auto
Sensor type	IR-filtered phototransistor
Turn on level	20 Lx (± 5 Lx)
Turn off level	Initial : 50 ± 5 Lx *Once reflected light (Δ) is detected : $50 + \Delta \pm 5$ Lx
Reflected light Compensation upper limit	1200 ± 100 Lx
Initialization stage	5s (On)
Adaptor	E26
Turn on delay	5s
Failure mode	Fail-Off
Operating Temperature	$-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$
Related Humidity	96%

FCC	Class B
Zero Crossing Control	Built-in
Certifications	 

Installation

- Select a function with the setting gear;
- Disconnect power;
- Screw bulb off from E26 socket;
- Put the light control unit into the E26 socket, and then turn clockwise to tighten;
- Screw bulb into the bulb holder of the unit;
- Connect power; Turn lamp switch ON.
- Avoid to use the unit in an opaque or reflective glass lantern, as well as use in a wet place.



Initial testing

During the daytime test, after powering on and waiting for 5s to automatically turn off the light, completely cover the photosensitive window with opaque materials. The lamp should be turned on after 5s. Don't use your fingers to block it, it is likely that the lights will fail to turn on because of the light passing through your fingers.

Attentions

1. Be sure to turn off the AC power supply during installation to avoid accidentally touching the metal thread inside the product E26.
2. If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.
3. Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.
4. After setting the rotation gear, the corresponding function will take effect after power on again.

Ordering Information

JL-320C H Y

JL-320C	1	2
	H	Y

1: Shell Color

H= black; K= gray; N= bronze; J= white

2: Y=Lamp Holder Silvery

null = Lamp Holder Golden

JL-4: Multi-volts rated, everywhere automatic.

The JL-4 series, designed according to UL773A standard, is the electronic version wide voltage wire-in photocontrol.

The models of the series vary in size and shape but typically are wired in red, white and black. The analogue electronic JL-40X, the digital electronic JL-41X and the intelligent digital electronic JL-42X are available for all products of the series of JL-4 while the products with the same X code are almost in the same or similar shape and size.

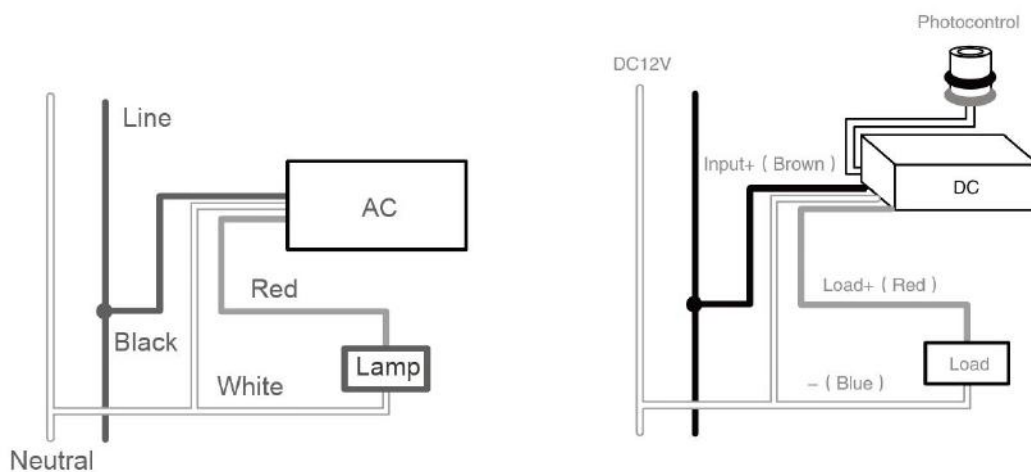
These photocontrols are applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level. They are designed with electronic circuits. The quicker response offers easy-to-test feature. Especially, most models can provide a wide voltage range for customer applications under almost power supplies. Further, a preset time-delay might avoid redundancy operation due to spotlight or lightning during the night time. Most products have been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A, and few are per European standards.



The The Family

Model No.	Photosensitive Sensor	Separated Sensor	Wire Color Coding	Parameter Setting	Voltage Type
JL-401B	CdS	No	Europe	Fixed	AC
JL-401BR	CdS	yes	Europe	Fixed	AC
JL-401C	CdS	no	US	Fixed	AC
JL-401CR	CdS	yes	US	Fixed	AC
JL-411R-12D	CdS	yes	US	Fixed	DC
JL-411R-24D	CdS	yes	US	Fixed	DC
JL-412C	phototransistor	no	US	Fixed	AC
JL-412CR	phototransistor	yes	US	Fixed	AC
JL-422C	phototransistor	no	US	Fixed	AC
JL-422CR	phototransistor	yes	US	Fixed	AC
JL-403C	CdS	no	US	Fixed	AC
JL-413C	CdS	no	US	Fixed	AC
JL-423	phototransistor	no	US	Customizable	AC
JL-404C	CdS	no	US	Fixed	AC
JL-424	phototransistor	no	US	Customizable	AC
JL-406C	CdS	no	US	Fixed	AC
JL-408C	CdS	no	US	Fixed	AC
JL-428	phototransistor	no	US	Fixed	AC

Wiring Diagram



Applications

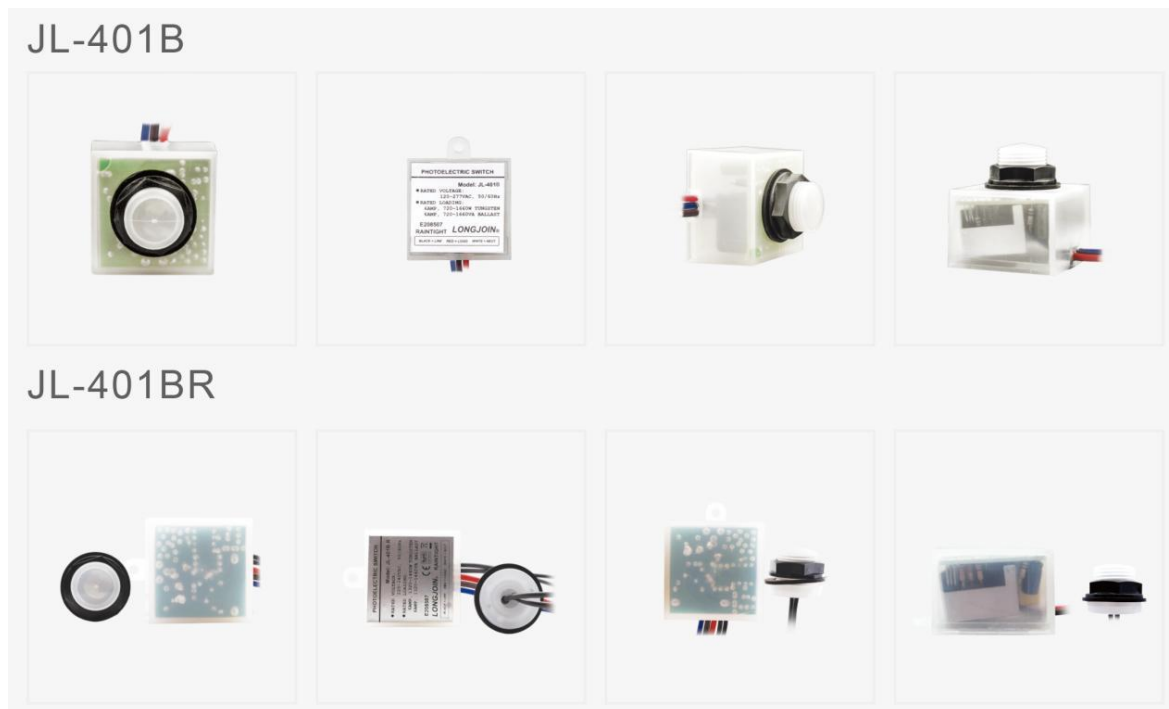
The photocontrol switch is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

Trouble Shooting

- It is recommended to be installed by a licensed electrician. The [Installation](#) and use of the equipment should be in accordance with the US National Electrical Code, local regulations and relevant industry standards.
- Check that the input voltage is consistent with the one shown on the photocontrol label. To avoid fire, conflict, or death, turn off the power or the circuit breaker.
- Do not face its sensor to artificial light directly. If installed on the shadow side of a building, or pointing down to the ground, the light may stay on in daytime. Do not place the photocontrol unit under the light (or reflected light) it controls, or it may cycle over the night time.

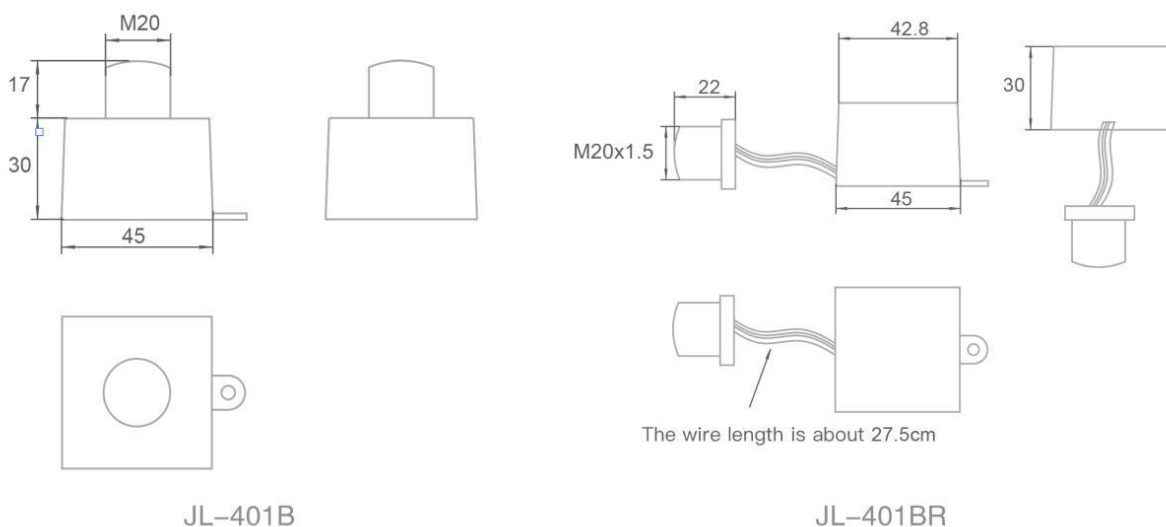
JL-401B

Direct Wire-In Electronic Photocontrol



Product Summary

The photocontrol JL-401B is applicable to control the garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. Further, a preset 10-30 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.



Features

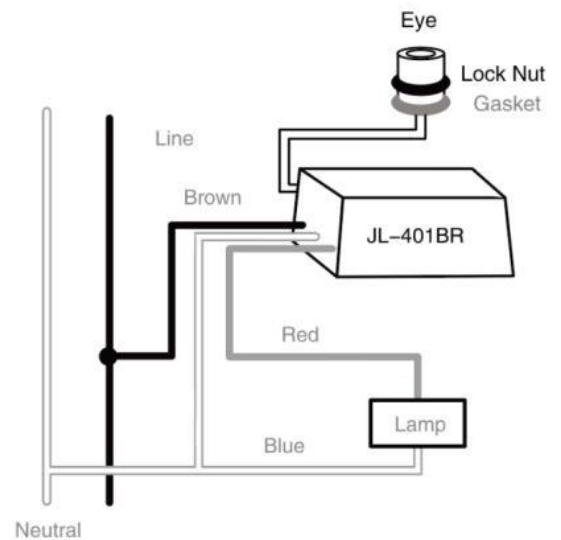
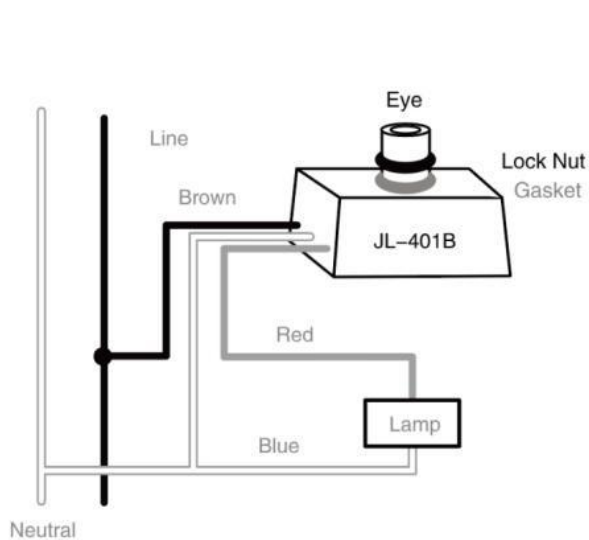
- Sensor Separated for flexible allocations inside fixture (JL-401BR only)
- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Waterproof Lens

Specifications

Model No.	JL-401B	JL-401BR
Rated Voltage	220~240VAC	
Rated Frequency	50/60Hz	
Sensor Type	CdS photocell	
Rated Loading	6A TUNGSTEN、6A Ballast	
Power Consumption	5W Max.	
Operate Levels	10~20Lx	Turn-On / 25~35Lx Turn-Off
Fail Mode	Fail-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Leads Length	AWG#18,AWM1015	
Surge Protection	40J/1750A (MOV)	
Certifications		

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-401B 12 R12 F –IP65

	1	2	3	4
JL-401B	12	R12	M	IP65

1: lead length

12= 12"

2: Sensor Position

R=sensor separated

Null=sensor on body

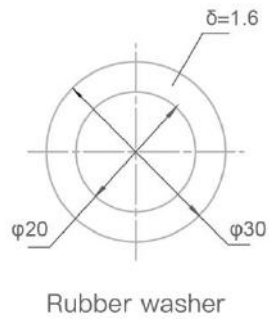
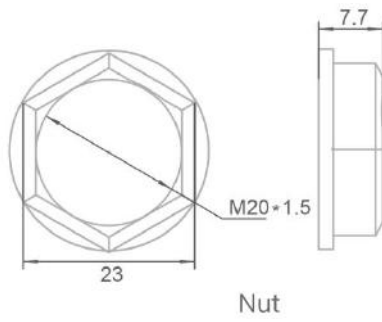
12= 12"sensor lead length

3: M(option) =UL holographic label

4: IP65 = Complete sealing with silicone gasket

IP54 = No silicone seal

Assemblies



JL-401C/401CR

Direct Wire-In Electronic Photocontrol

JL-401C

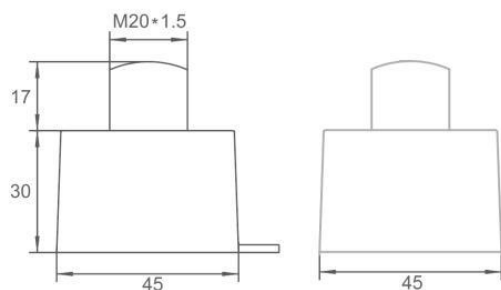


JL-401CR

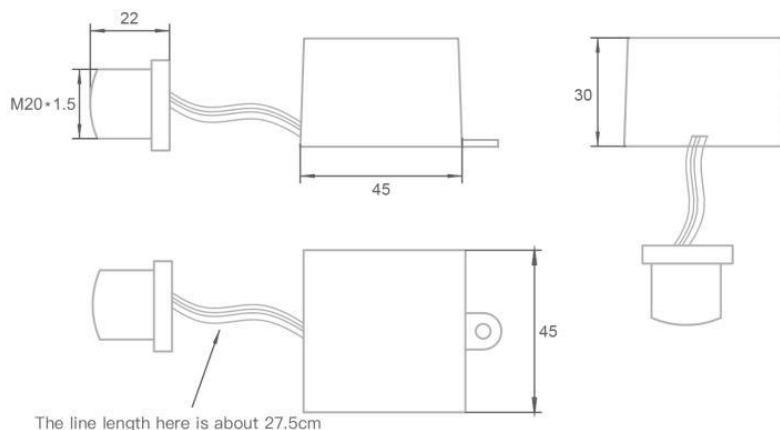


Product Summary

The photocontrol JL-401C is applicable to control the garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. Further, a preset 10-30 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time.



JL-401C



JL-401CR

Features

- Sensor Separated for flexible allocations inside fixture (JL-401CR only)
- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Waterproof Lens

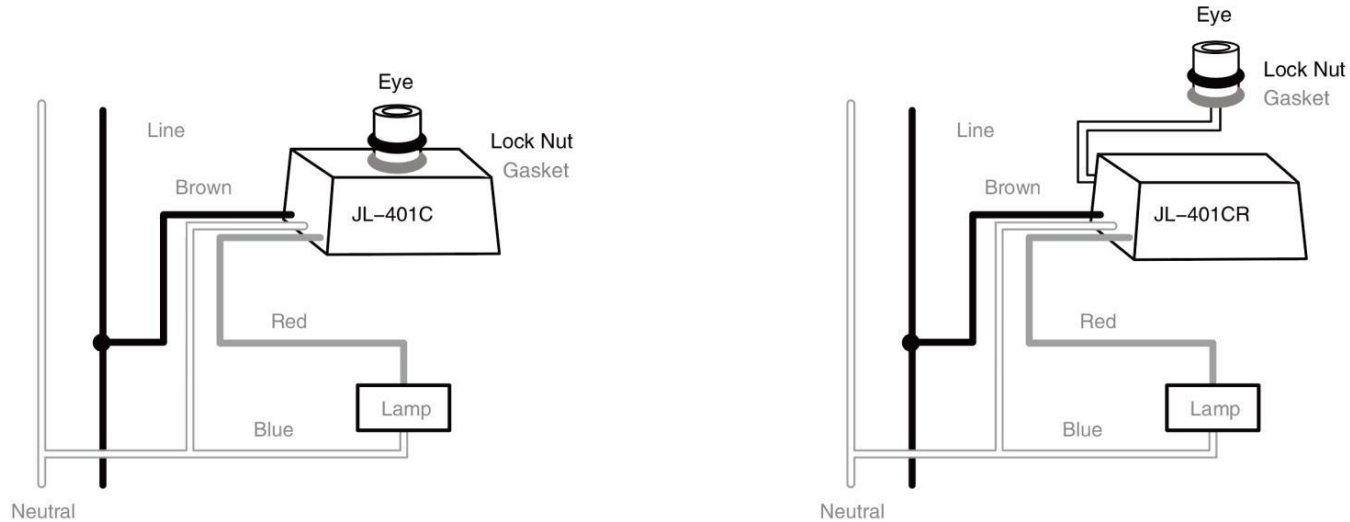
Specifications

Model No.	JL-401C	JL-401CR
Rated Voltage	120~277VAC	
Available Voltage Range	105~305VAC	
Rated Frequency	50/60Hz	
Sensor Type	CdS photocell	
Rated Loading	6A TUNGSTEN、6A Ballast	
Power Consumption	5W Max.	
Operate Levels	10~20Lx Turn-On / 25~35Lx Turn-Off	
Fail Mode	Fail-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Leads Length	AWG#18,AWM1015	

Surge Protection	40J/1750A (MOV)
Certifications	  

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-401C 12 R12 M –IP65

	1	2	3	4
JL-401C	12	R12	M	IP65

1: lead length

12=12"

2: Sensor Position

R=sensor separated

Null=sensor on body

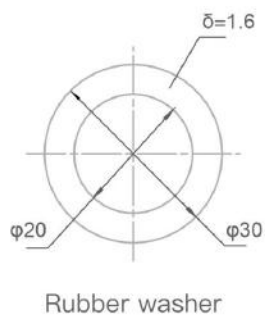
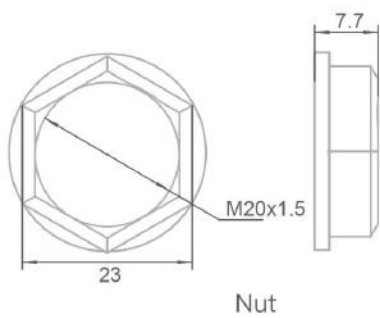
12=12"sensor lead length

3: M(option) =UL holographic label

4: IP65 = Completely sealed with silicone

IP54 = No silicone seal

Assemblies



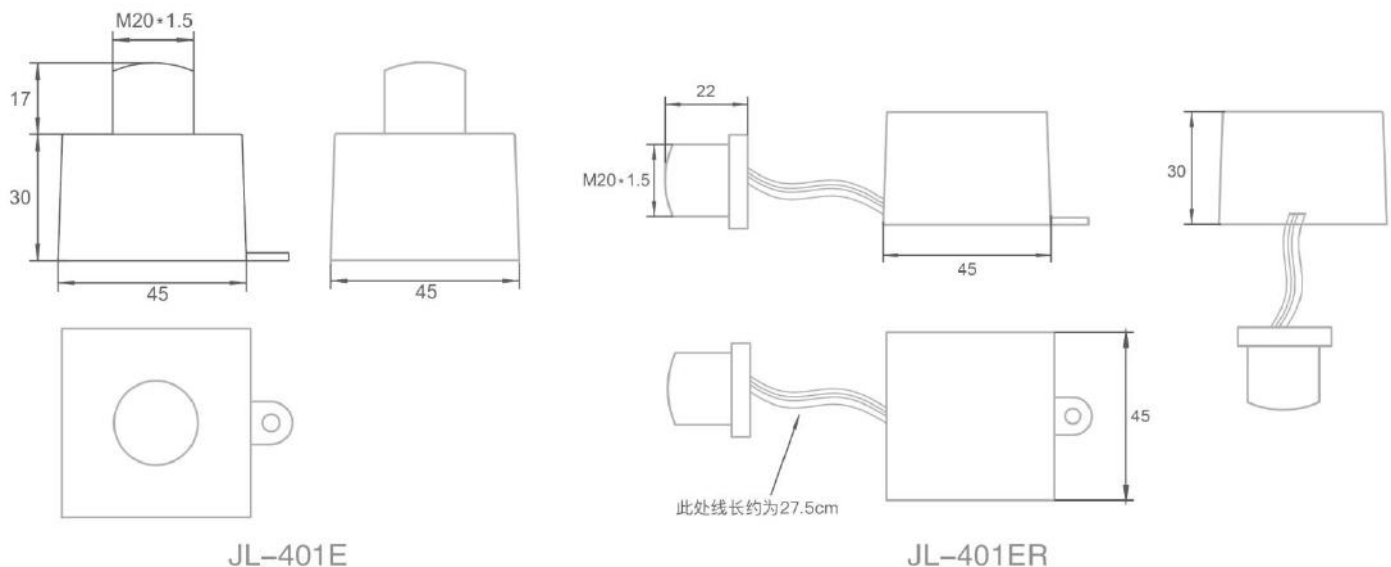
JL-401E (R)

Direct Wire-In Electronic Photocontrol



Product Summary

The photoelectric switch JL-401E is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time.



Features

- Sensor Separated for flexible allocations inside fixture (JL-401ER only)

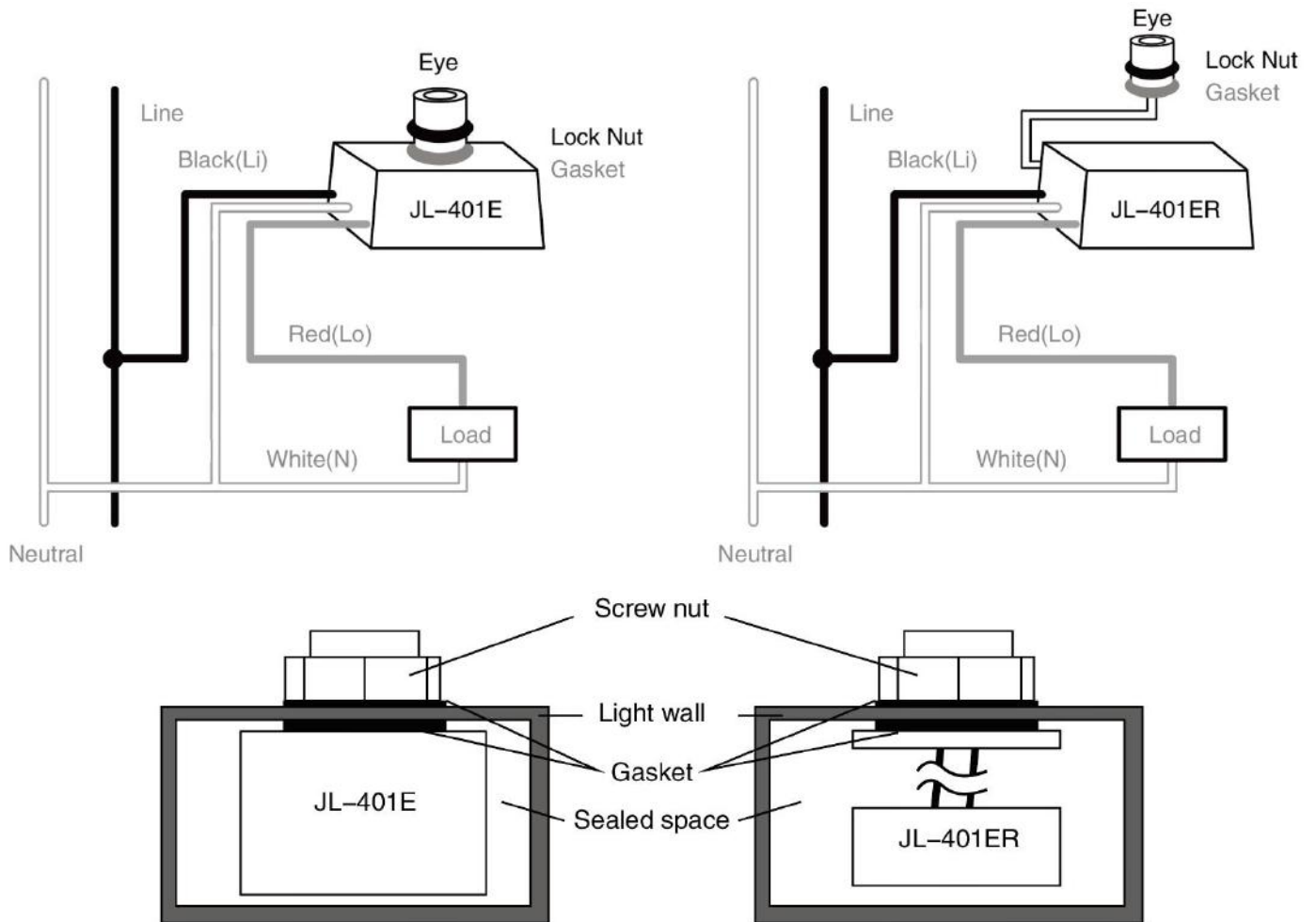
- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Waterproof Lens

Specifications

Model No.	JL-401E	JL-401ER
Rated Voltage	347VAC	
Available Voltage Range	120~380VAC	
Rated Frequency	50/60Hz	
Rated Loading	1800W Tungsten, 1800VA Ballast, 5A E-Ballast	
Power consumption	0.5W max.	
Operate Level	10~30Lx On ; 30~60Lx Off	
Fail Mode	Fail-On	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
IP Grade	IP65/IP54	
Leads Length	AWG#16, AWM1015	
Sensor Dimensions	21 x 25mm Dia. [20mm Dia. mounting Hole]	
Sensor Type	IR-Filtered Phototransistor	
Surge Protection	40J/1750A (MOV)	
Certifications	  	

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-401E 12 R12 M –IP65

	1	2	3	4
JL-401E	12	R12	M	IP65

1: lead length

12=12"

2: Sensor Position

R=sensor separated

Null=sensor on body

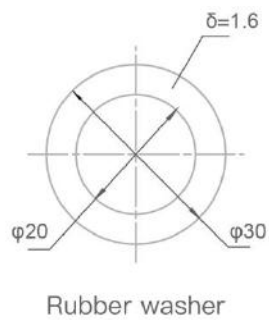
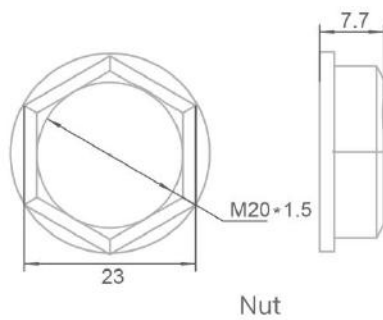
12=12"sensor lead length

3: M(option) =UL holographic label

4: IP65 = Complete sealing with silicone gasket

IP54 = No silicone seal

Assemblies



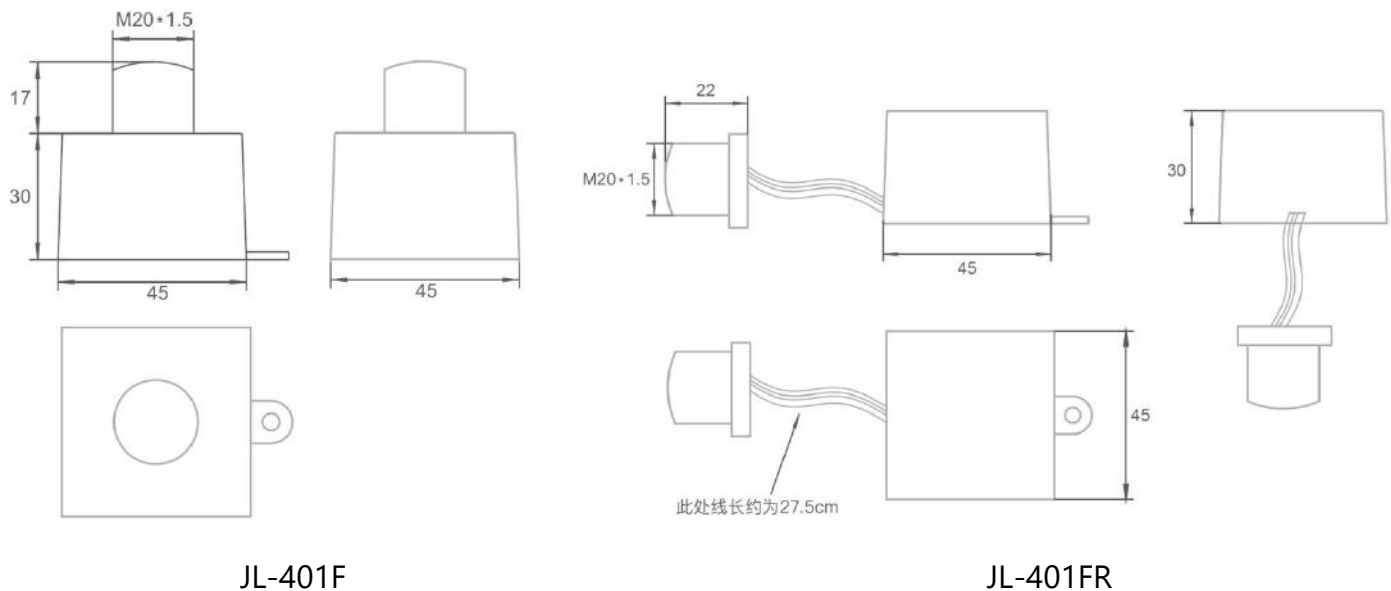
JL-401F (R)

Direct Wire-In Electronic Photocontrol



Product Summary

The photoelectric switch JL-401F is applicable to control the street lighting, garden lighting, passage lighting and doorway lighting automatically in accordance with the ambient natural lighting level. Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time.



Features

- Sensor Separated for flexible allocations inside fixture (JL-401FR only)

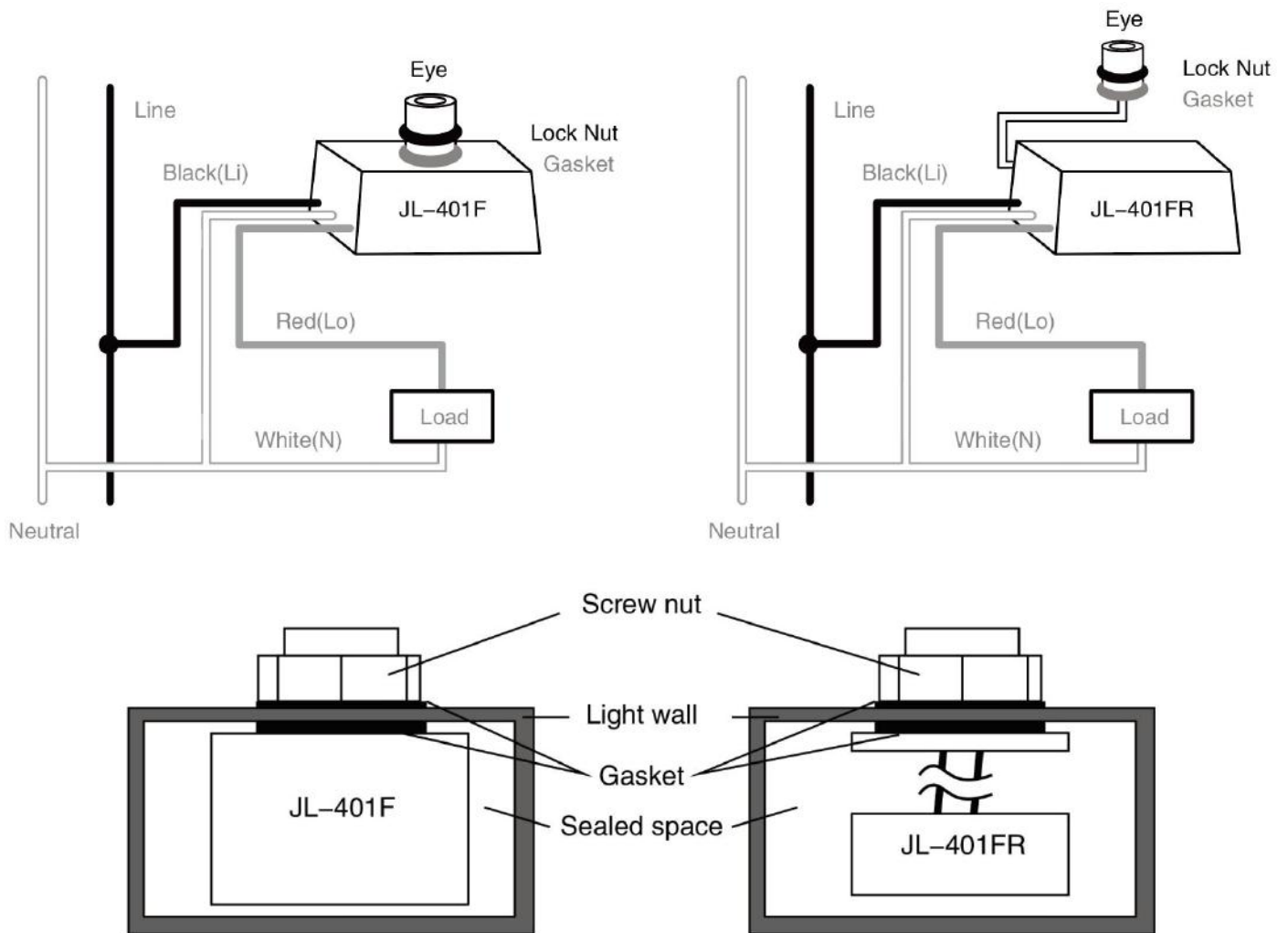
- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Waterproof Lens

Specifications

Model No.	JL-401F	JL-401FR
Rated Voltage	480VAC	
Available Voltage Range	347~480VAC	
Rated Frequency	50/60Hz	
Rated Loading	1800W Tungsten, 1800VA Ballast	
Power consumption	5W max.	
Operate Level	10~30Lx On ; 30~60Lx Off	
Fail Mode	Fail-On	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
IP Grade	IP65/IP54	
Leads Length	AWG#16, AWM1015	
Sensor Dimensions	21 x 25mm Dia. [20mm Dia. mounting Hole]	
Sensor Type	IR-Filtered Phototransistor	
Surge Protection	255J/6000A (MOV)	
Certifications	  	

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-401F 12 R12 M –IP65

	1	2	3	4
JL-401F	12	R12	M	IP65

1: lead length

12=12"

2: Sensor Position

R=sensor separated

Null=sensor on body

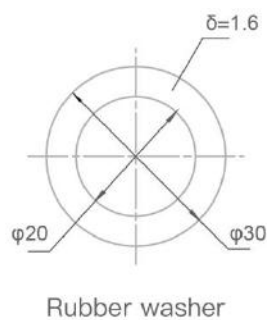
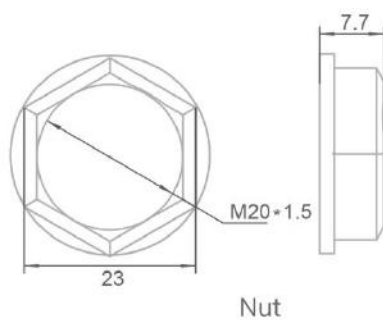
12=12"sensor lead length

3: M(option) =UL holographic label

4: IP65 = Complete sealing with silicone gasket

IP54 = No silicone seal

Assemblies



JL-411(R)-12D/24D

Improved Electronic Direct Wire-In Photocontrol (DC)

JL-411(R)-12D

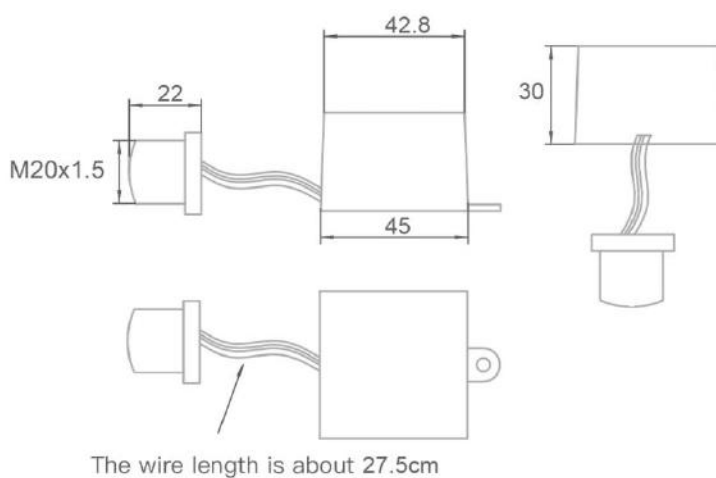


JL-411(R)-24D



Product Summary

The photocontrol JL-411(R)-24D is applicable to control the DC rated lightings automatically in accordance with the ambient lighting level. Its R version provides a separated sensor assembly.



Features

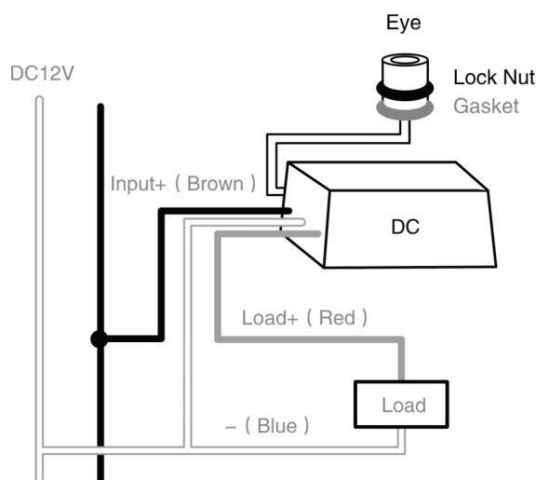
- DC models
- Available in 12VDC and 24VDC sizes
- Sensor Separated for flexible allocations inside fixture
- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Waterproof Lens

Specifications

Model No.	JL-411(R)-12D	JL-411(R)-24D
Rated Voltage	12VDC	24VDC
Rated Loading	75W	
Power Consumption	1W Max.	
On-off Levels	5~15Lx Turn-On / 20~80Lx Turn-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Certifications		

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 2 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-411 12D 12 R12 IP65

	1	2	3	4
JL-411	12D	12	R12	IP65

1: 12D=12VDC

24D=24VDC

2: lead length

12=12"

Customizable

3: Sensor Position

R=sensor separated

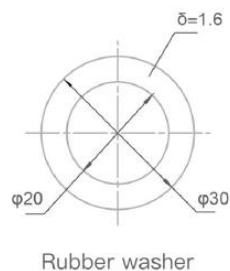
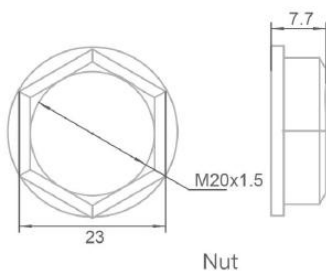
Null=sensor on body

12=12"sensor lead length

4: IP65 = Complete sealing with silicone gasket

IP54 = Standard with foam gasket

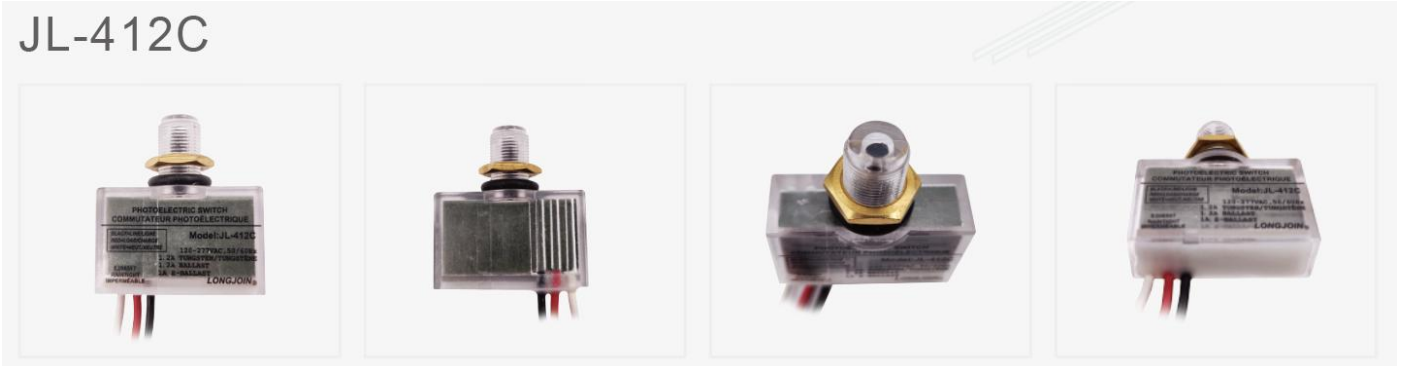
Assemblies



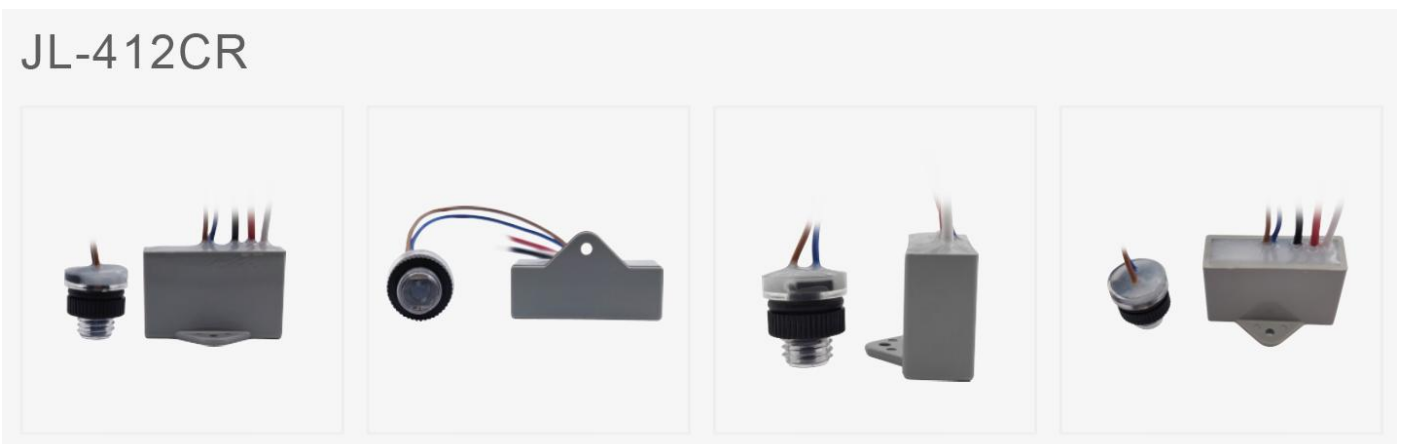
JL-412C(R)

Miniature Improved Electronic Direct Wire-In Photocontrol

JL-412C



JL-412CR



Product Summary

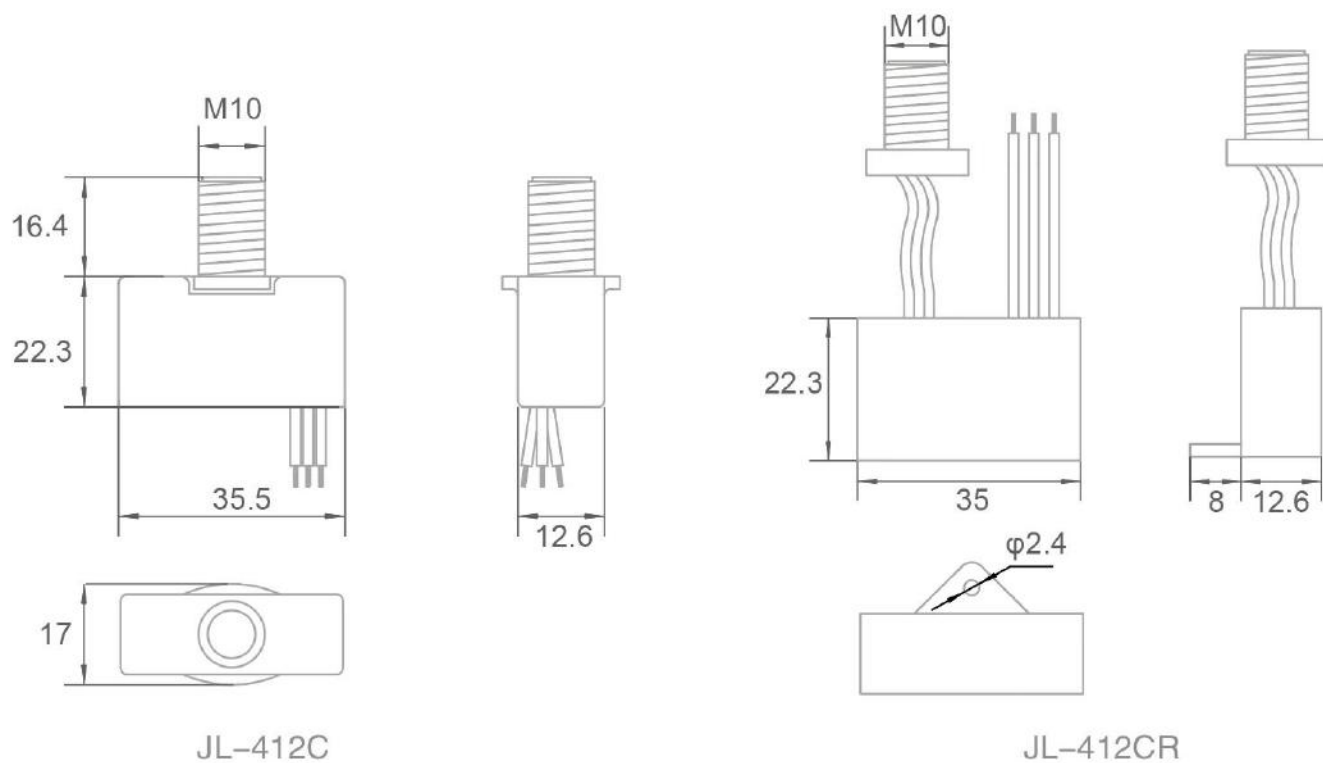
The photocontrol JL-412C(R) is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature, while a miniature profile supports most smaller fixtures.

Further, a preset 3-10 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time

This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A.

Its R version provides a separated sensor assembly.



Features

- UL773A direct wire-in
- 120~277V Multi-Volts
- IR-Filtered Phototransistor Sensor
- IP65 protection
- Miniature size

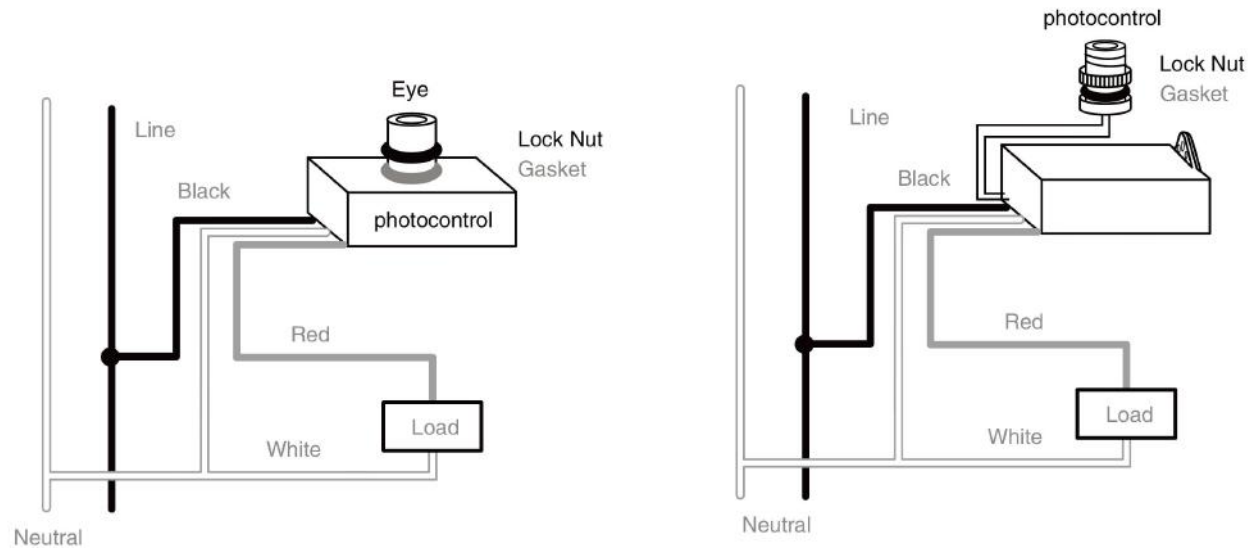
Specifications

Model No.	JL-412C	JL-412CR
Rated Voltage	120~277VAC	
Available Voltage Range	105~305VAC	
Rated Frequency	50/60Hz	
Rated Loading	1.2A Tungsten / Ballast 1A e-Ballast	
Power Consumption	1W Max.	
On-off Levels	10~30Lx Turn-On / 30~80Lx Turn-Off	

Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Leads Length	AWG #18, AWM1430
Certifications	  

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Test will take approximately 1 minutes.

Ordering Information

JL-412C 09 R09 M

	1	2	3
JL-412C	09	R09	M

2: lead length

09=09"

Customizable

3: Sensor Position

R=sensor separated

Null=sensor on body

9=9"sensor lead length

4: M(option) =UL holographic label

JL-422C(R)

Miniature Direct Wire-In Digital Photocontrol

JL-422C



JL-422CR



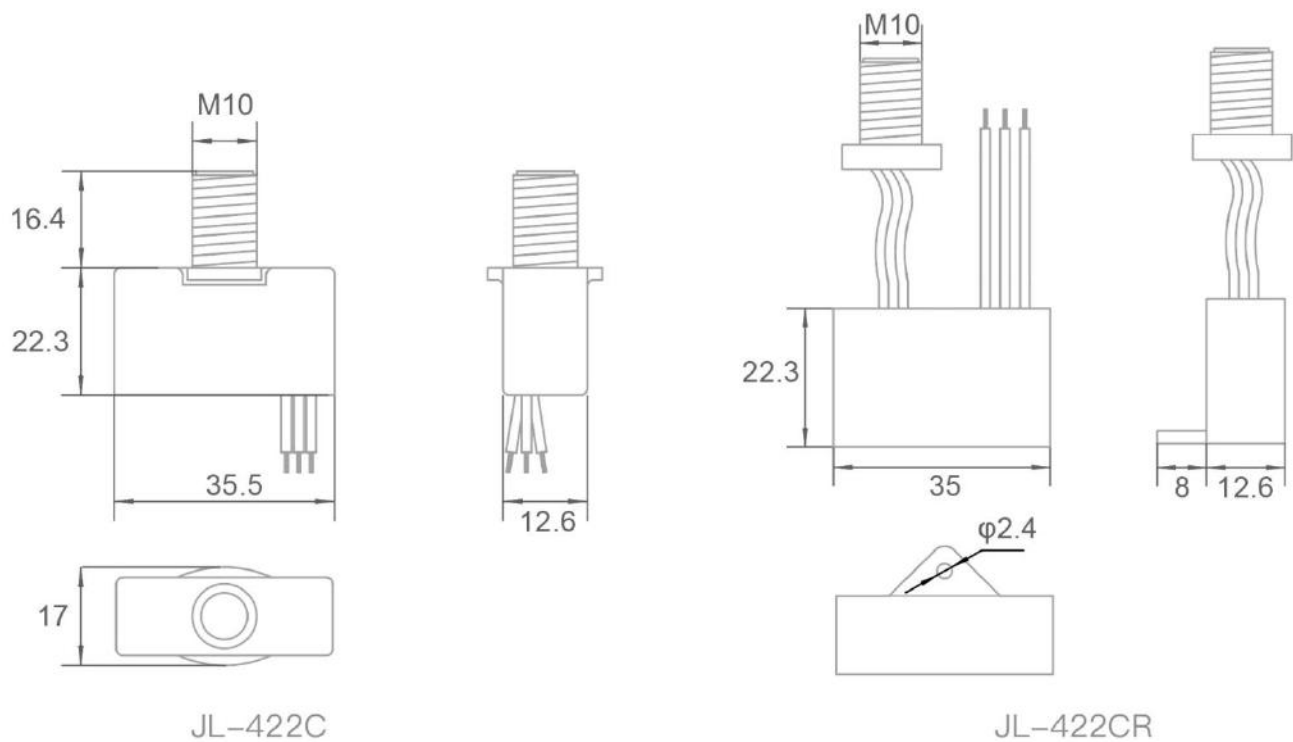
Product Summary

The photocontrol JL-422C(R) is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature, while a miniature profile supports most smaller fixtures. Further, a preset 3-10 seconds time-delay might avoid redundancy operation due to spotlight or lightning during the night time

This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A.

Its R version provides a separated sensor assembly.



Features

- UL773A direct wire-in
- 120~277V Multi-Volts
- IR-Filtered Phototransistor Sensor
- IP65 protection
- Miniature size
- Interference lighting filtering
- Zero crossing function

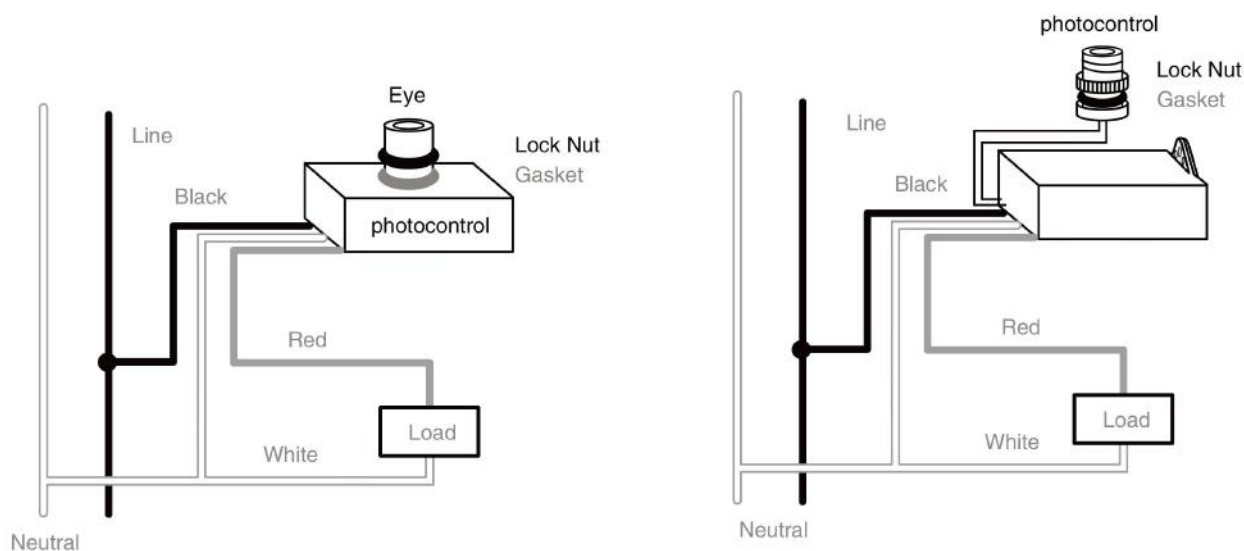
Specifications

Model No.	JL-422C	JL-422CR
Rated Voltage	120~277VAC	
Available Voltage Range	105~305VAC	
Rated Frequency	50/60Hz	
Rated Loading	1.2A Tungsten / Ballast 1A e-Ballast	
Power Consumption	1W Max.	

On Levels	16 Lx (± 5)
Off Levels	Initial: 24 Lx (± 5) *Once reflected light (Δ) is detected: $24 \pm \Delta \pm 5$ Lx
Fail Mode	Fail-Off
Delayed	5-10S (Customizable)
Reflected light compensation upper limit	1800Lx
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Leads Length	AWG #18, AWM1430
Certifications	

Installation

Disconnect power, place screw thread of the photocontrol in knockout hole and fasten with rubber gasket and lock-nut. Wire according to the diagram in below. Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Test will take approximately 1 minutes.

Ordering Information

JL-422C 09 R09 M

JL-422C	1	2	3
	09	R09	M

2: lead length

09=09"

Customizable

3: Sensor Position

R=sensor separated

Null=sensor on body

9=9"sensor lead length

4: M(option) =UL holographic label

JL-403C

Direct Wire-In Electronic Photocontrol

JL-403C



JL-403CM



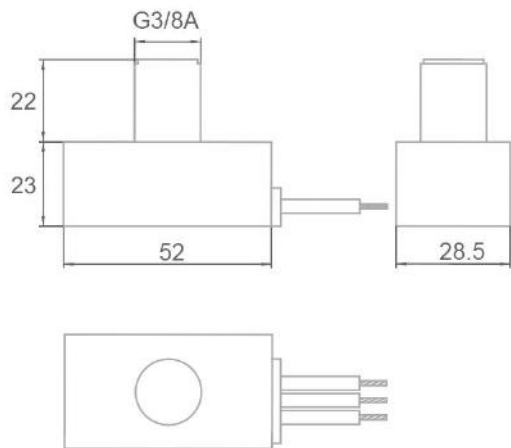
Product Summary

The photocontrol JL-403C is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

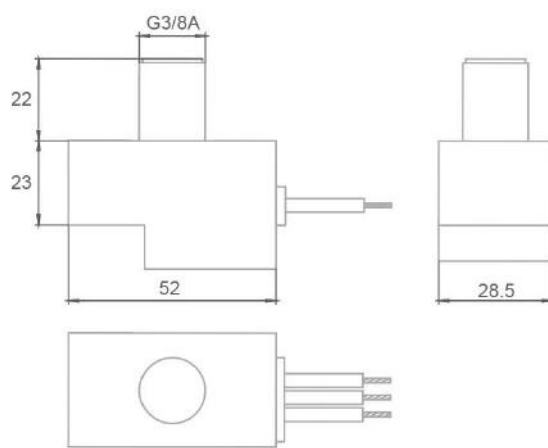
This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature. Especially, model JL-403C provides a wide voltage range for customer applications under almost power supplies.

Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time

This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A.



JL-403



JL-403CM

Features

- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning

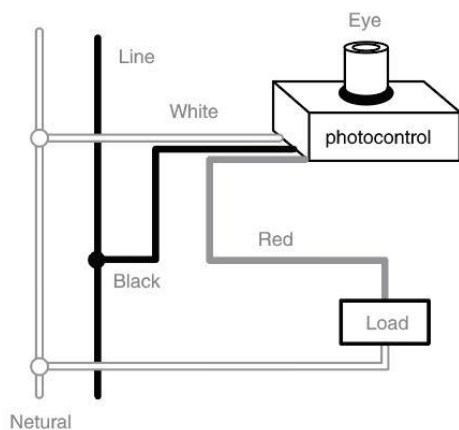
Specifications

Model No.	JL-403C	JL-403CM	JL-403CW
Rated Voltage	120~277VAC		
Available Voltage Range	105~305VAC		
Rated Frequency	50/60Hz		
Rated Loading	500W Tungsten, 850VA Ballast 5A e-Ballast		
Power Consumption	1.8W@120VAC		
Operate Levels	10~20Lx Turn-On / 30~80Lx Turn-Off		
Ambient Temperature	-40°C ~ +70°C		
Related Humidity	96%		
Leads	AWG #18, AWM 1015 4" min		
Failure Mode	Fail-Off		
Rainproof Cap	Optional		
Certifications	  		

Installation

Disconnect power, remove junction box cover, place the photocontrol through knockout hole and fasten with locknut. Wire according to the diagram in below.

Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-403CM 18 04 L M N W BC F -IP54

	1	2	3	4	5	6	7	8	9	10
JL-403C	M	18	04	L	M	N	W	BC	F	IP54

1: M(optional) = MOV23, 460Joule / 10000Amp

2: Lead Rating

18= 18 AWG, 105°C

18G= 18 AWG, 150°C

3: Lead Length

XX, in inches (04 min.)

4: L = Double lock-nut

null= single lock-nut

5: M(option) =UL holographic label

6: N = single flat rubber gasket

NN = double flat rubber gasket

O = double O-ring

NULL = rubber sponge gasket

7: W(option)= aluminum panel

8: optional cap

BC = black shading cap

CC= transparent rain cap

Null = none

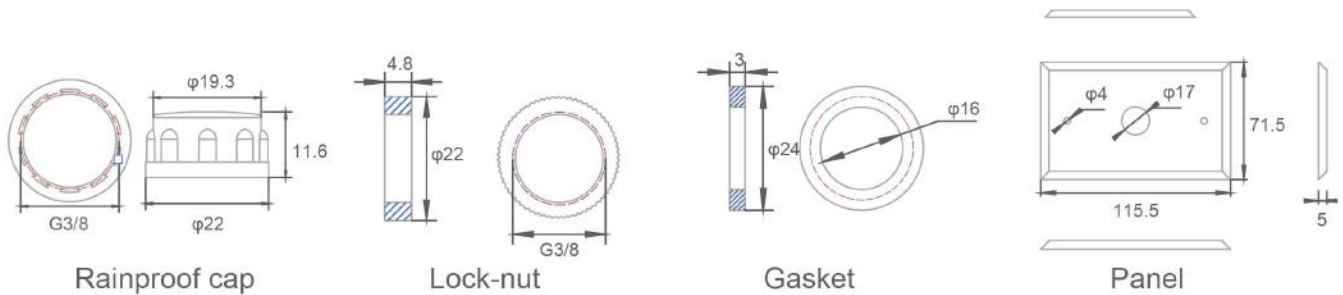
9: (option)

F = European wiring color code with RoHS mark (UKCA)

10: IP54 = Black enclosure ultrasonic bonded with clear lens

IP65 = Silicone sealed translucent enclosure

Assemblies



JL-413C

Improved Electronic Direct Wire-In Photocontrol

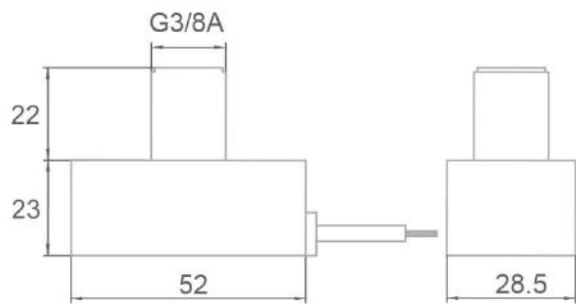


Product Summary

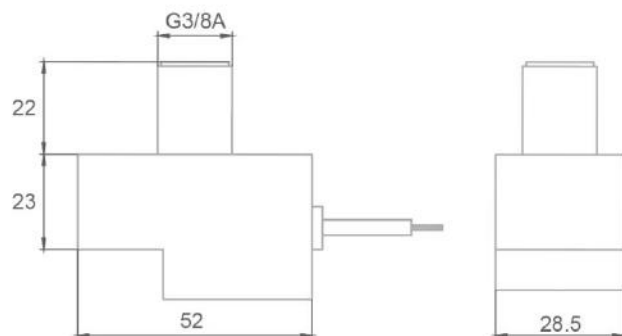
The photocontrol JL-413C is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature. Especially, model JL-413C provides a higher power factor performance.

Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time



JL-413



JL-413CM

Features

- Improved Power Factor*
- Wire outlets sealed for IP65+
- Additional Clear Cap for raintight available
- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning

Note: *compared to JL-403C

Specifications

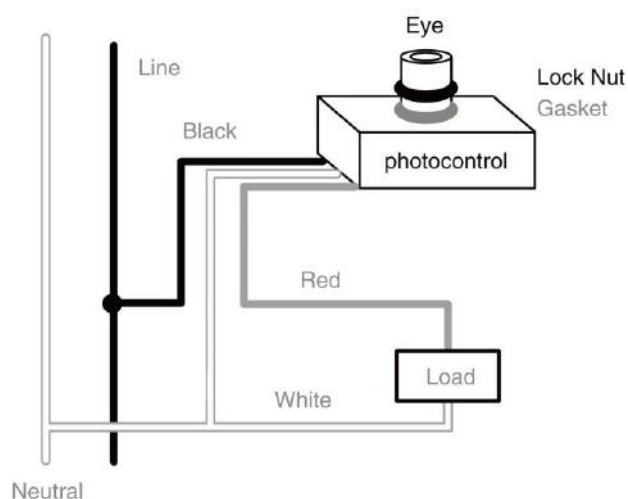
Model No.	JL-413C
Rated Voltage	120~277VAC
Available Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Rated Loading	1000W Tungsten 1200VA Ballast @120VAC 1800VA Ballast @208-277VAC 8A e-Ballast @120VAC 5A e-ballast @208-277VAC
Power Consumption	0.5W Max.
Operate Levels	10~20Lx Turn-On / 30~80Lx Turn-Off
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%

Leads Length	AWG #16,AWM 1015 4" min
Failure Mode	Fail-Off
Rainproof Cap	Optional
Surge Protection	460Joule / 10000Amp (MOV)
Certifications	  

Installation

Disconnect power, remove junction box cover, place the photocontrol through knockout hole and fasten with locknut. Wire according to the diagram in below.

Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

It is normal for the SWITCH to take few seconds to turn off when first installed.

To test “turn on” during daytime, cover its eye with opaque material.

Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.

Test will take approximately 1 minutes.

Ordering Information

JL-413CM 18 04 L M N H W BC F -IP54

	1	2	3	4	5	6	7	8	9	10
JL-413C	M	18	04	L	M	N	W	BC	F	IP54

1: M(optional) = MOV23, 460Joule / 10000Amp

2: Lead Rating

18=18 AWG, 105°C

18G=18 AWG, 150°C

3: Lead Length

XX, in inches (04 min.)

4: L = Double lock-nut

null= single lock-nut

5: M(option) =UL holographic label

6: N = single flat rubber gasket

NN = double flat rubber gasket

O = double O-ring

NULL = rubber sponge gasket

7: W(option)= aluminum panel

8: optional cap

BC = black shading cap

CC= transparent rain cap

Null = none

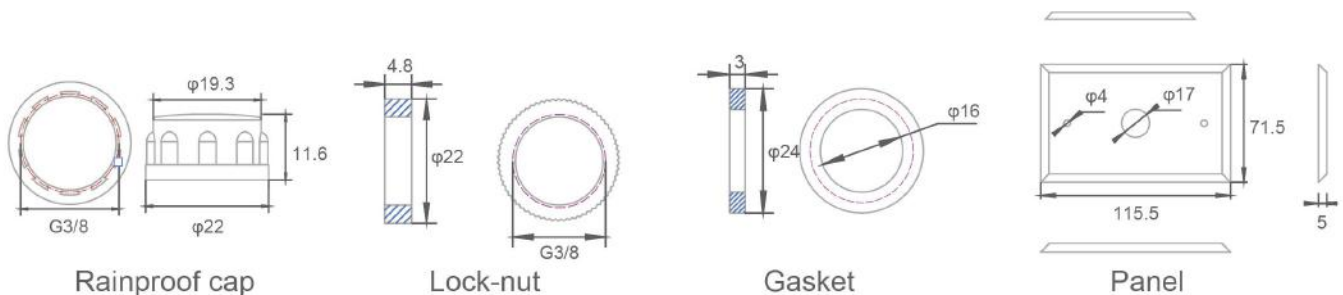
9: (option)

F = European wiring color code with RoHS mark (UKCA)

10: IP54 = Black enclosure ultrasonic bonded with clear lens

IP65 = Silicone sealed translucent enclosure

Assemblies



JL-423

Direct Wire-In Digital Photocontrol (Zero cross +FCC)



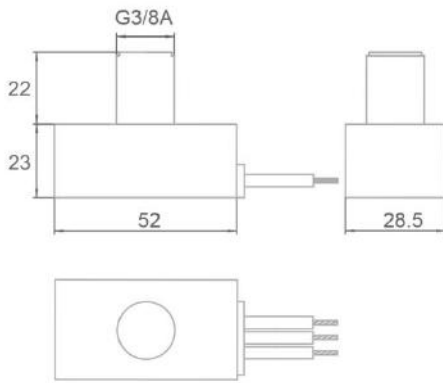
Product Summary

The photocontrol JL-423 series is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

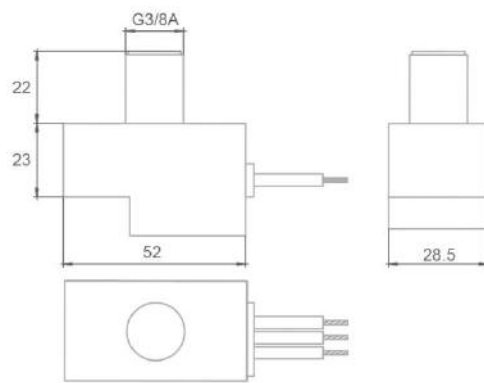
This product is designed with electronic circuits with MCU incorporated. Its quicker response with time delay of 5 seconds offers easy-to-test feature while avoiding redundancy operation due to spotlight or lightening during night time. Especially, it supports midnight sleeping and reburning before dawn.

Optional Z version has zero-cross technology built-in for longer work life, while conforms FCC regulations.

Further, JL-423CM provides surge protection feature up to 235J/5000A.



JL-423



JL-423CM

Features

- UL773A direct wire-in
- Multi-Volt applicable
- Fail-On default, Fail-Off customizab
- Optional MOV surge protectionle
- IR-Filtered Phototransistor Sensor
- Customizable night multi-section timing switch
- IP54 / IP65 protections Available , Rain cap can be added
- Instant / Delayed Switching Available

Specifications

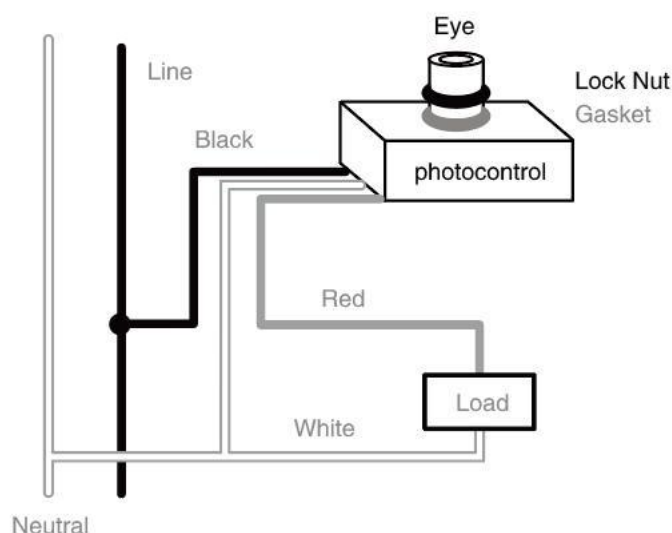
Model No.	JL-423C	JL-423CM	JL-423CMZ	JL-423CL
Rated Voltage	120~277VAC			
Available Voltage Range	105~305VAC			
Rated Frequency	50/60Hz			
Rated Loading	1000W Tungsten 1200VA Ballast @120VAC 1800VA Ballast @208-277VAC 8A e-Ballast @120VAC 5A e-Ballast @208-277VAC			
Power Consumption	0.5W Max.			
Operate Levels	16Lx Turn-On / 24Lx Turn-Off (customizable)			
Time-delay	5-10s (customizable)			

Ambient Temperature	-40℃ ~ +70℃		
Related Humidity	96%		
Leads Length	AWG #16,AWM 1015 4" min		
Failure Mode	C4:Fail-On C5:Fail-Off		
Surge Protection	-	460J/ 10000A(MOV)	-
Zero crossing	-	●	
FCC	●		
Rainproof Cap	Optional		
Certifications	  		

Installation

Disconnect power, remove junction box cover, place the photocontrol in knockout hole and fasten with locknut.

Wire according to the diagram in right hand. Do not install the photocontrol with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few seconds to turn off when first installed.

- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

Ordering Information

JL-423CM Z 16 04 L M N W BC F -IP54 (16 05 24 05 T3.0)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
JL-423C	M	Z	16	04	L	M	N	W	BC	F	IP54	16	05	24	05	T3.0

1: M(optional) = MOV23, 460Joule / 10000Amp

2: Z (option) =zero-cross

L=Long lifespan (with zero crossing control technology)

3: Lead Rating

16=16 AWG, 105°C

16G=16 AWG 150°C

4: Lead Length

XX, in inches (04 min.)

5: L = Double lock-nut

null= single lock-nut

6: M(option) =UL holographic label

7: N = single flat rubber gasket

NN = double flat rubber gasket

O = double O-ring

NULL = rubber sponge gasket

8: W(option)= aluminum panel

9: optional cap

BC = black shading cap

CC= transparent rain cap

Null = none

10: (option)

F = European wiring color code with RoHS mark (UKCA)

11: IP54 = Black enclosure ultrasonic bonded with clear lens

IP65 = Silicone sealed translucent enclosure

12: Turn On Level in Lux

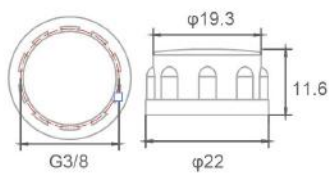
13: Turn On Time Delay in second

14: Turn Off Level in Lux

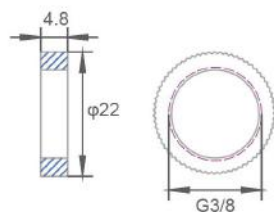
15: Turn Off Time Delay in second

16: Midnight Sleeping Time in hour (option)

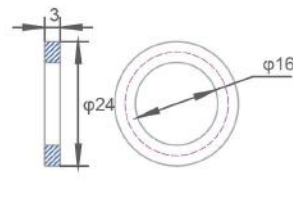
Assemblies



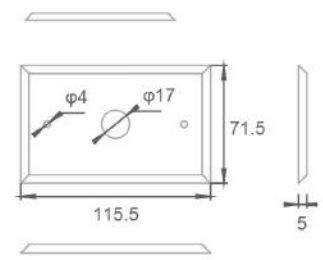
Rainproof cap



Lock-nut



Gasket



Panel

JL-404C

Swiveled Wire-In Electronic Photocontrol

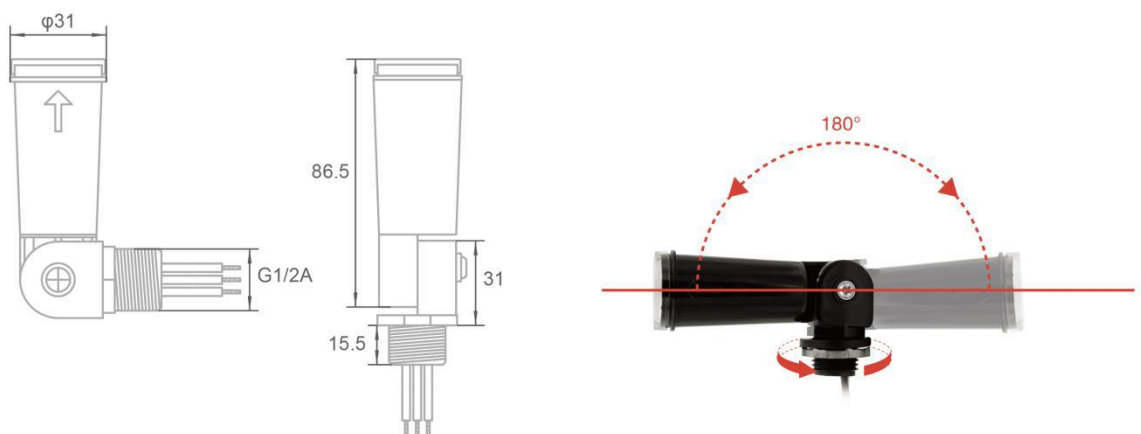


Product Summary

The Photocontrol JL-404C is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature. Especially, model JL-404C provides a wide voltage range for customer applications under almost power supplies.

Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time. This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A.



Features

- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Swivel Incorporated

Specifications

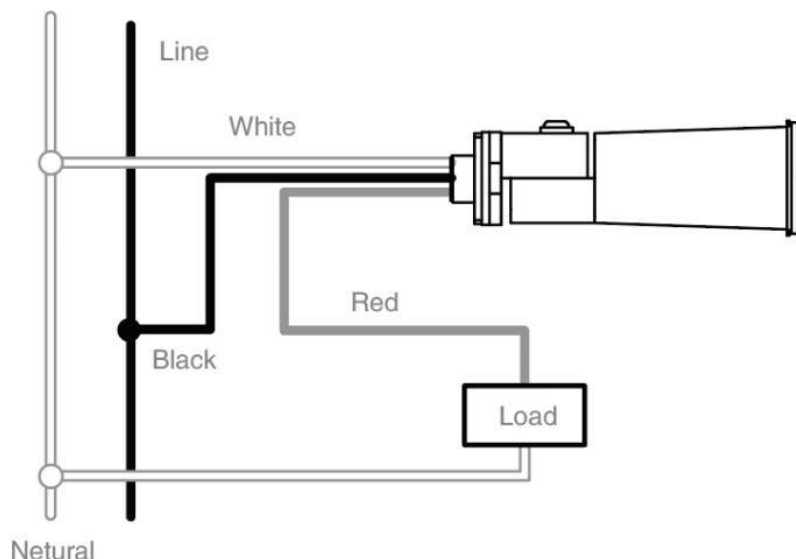
Model No.	JL-404C
Rated Voltage	120~277VAC
Available Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Rated Loading	500W Tungsten, 850VA Ballast 5A e-Ballast
Power Consumption	1.8W@120VAC
Operate Levels	10~20Lx Turn-On / 30~80Lx Turn-Off
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Leads	AWG #18,105°C 4" min
Failure Mode	Fail-Off
Certifications	  

Installation

Disconnect power, remove junction box cover, place the photocontrol through knockout hole and fasten with locknut.

Wire according to the diagram in below.

Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

* Operation of this switch is not affected by weather, moisture or temperature changes.

Ordering Information

JL-404C 18 04 L H M

	1	2	3	4	5
JL-404C	18	04	L	H	M

1: Lead Rating

18=18 AWG, 105°C rated

18G=18 AWG 150 °C rated

2: Lead Length

XX, in inches (04 min.)

3: L = Closed

Q = Notched

4: H = black

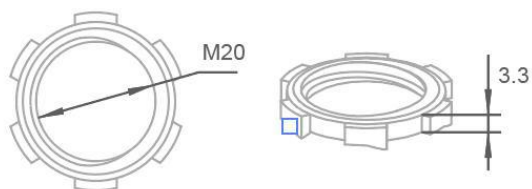
K1 = light gray

K2 = dark gray

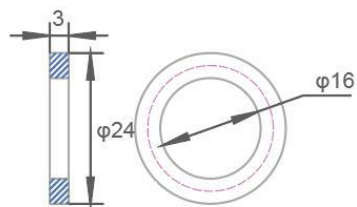
5: M(option) =UL holographic label

*Default configuration: zinc nut x1, rubber gasket x1

Assemblies



Lock-nut



Gasket

JL-424

Swiveled Wire-In Digital Photocontrol (Zero cross +FCC)



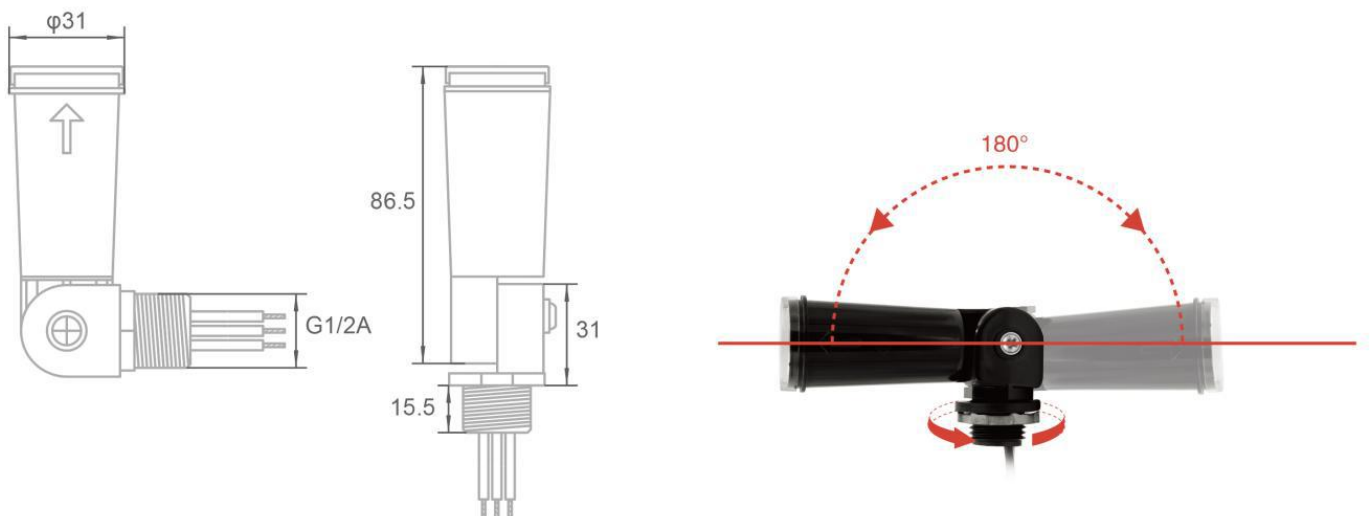
Product Summary

The photocontrol JL-424 series is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits with MCU incorporated. Its quicker response with time delay of 5 seconds offers easy-to-test feature while avoiding redundancy operation due to spotlight or lightening during night time. Especially, it supports midnight sleeping and reburning before dawn.

Optional Z version has zero-cross technology built-in for longer work life, while conforms FCC regulations.

Further, JL-424 provides surge protection feature up to 235J/5000A.



Features

- UL773A direct wire-in
- 90~305V Multi-Volts
- Fail-On / Fail-Off Modes Available
- Swivel Incorporated
- IR-Filtered Phototransistor Sensor
- Midnight Sleeping Available
- IP54 / IP65 protections Available(After assembly with the lamp, it can meet IP65 protection)
- Instant / Delayed Switching Available

Specifications

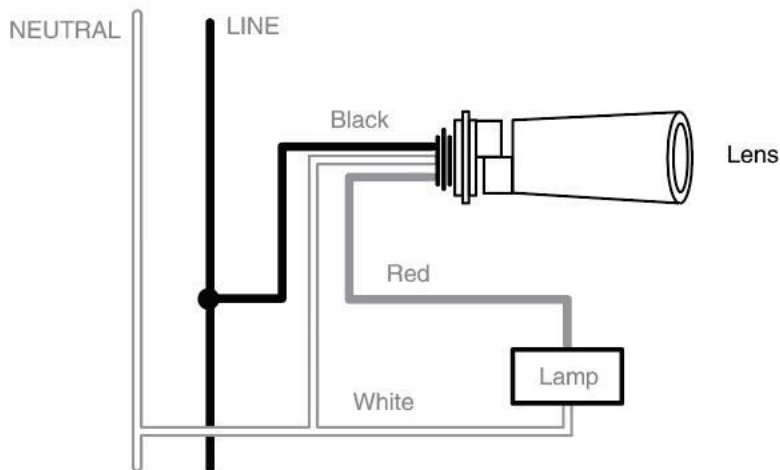
Model No.	JL-424CZ
Rated Voltage	120~277VAC
Available Voltage Range	105~305VAC
Rated Frequency	50/60Hz
Rated Loading	1000W Tungsten, 1200VA Ballast @120VAC 1800VA Ballast @208-277VAC 8A e-Ballast @120VAC 5A e-Ballast @208~277V
Power Consumption	0.5W Max.
Operate Levels	16Lx Turn-On / 24Lx Turn-Off (customizable)
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Leads Length	AWG #16,105°C 4" min
Failure Mode	C4:Fail-On C5:Fail-Off
Surge Protection (MOV)	-
Zero Crossing	●
FCC	●

Installation

Disconnect power, remove junction box cover, place the photocontrol in knockout hole and fasten with locknut.

Wire according to the diagram in right hand.

Do not install the photocontrol with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

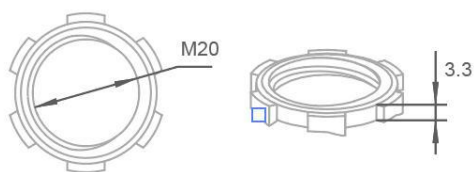
Ordering Information

JL-424C Z 16 04 L M (16 05 24 05 T3.0)

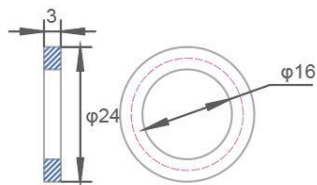
	1	2	3	4	5	6	7	8	9	10
JL-424C	Z	16	04	L	M	16	05	24	05	T3.0

- 1: Z= Zero cross (option)
 - 2: Lead Rating
 - 16= 16 AWG, 105°C rated
 - 16G= 16 AWG 150 °C rated
 - 3: Lead Length
 - XX, in inches (04 min.)
 - 4: L = Double lock-nut
 - null= single lock-nut
 - 5: M(option) =UL holographic label
 - 6: Turn On Level in Lux
 - 7: Turn On Time Delay in second
 - 8: Turn Off Level in Lux
 - 9: Turn Off Time Delay in second
 - 10: Midnight Sleeping Time in hour (option)
- *Default configuration: zinc nut x1, rubber gasket x1

Assemblies



Lock-nut



Gasket

JL-406C

Conduit Wire-In Electronic Photocontrol

JL-406C



JL-406CV

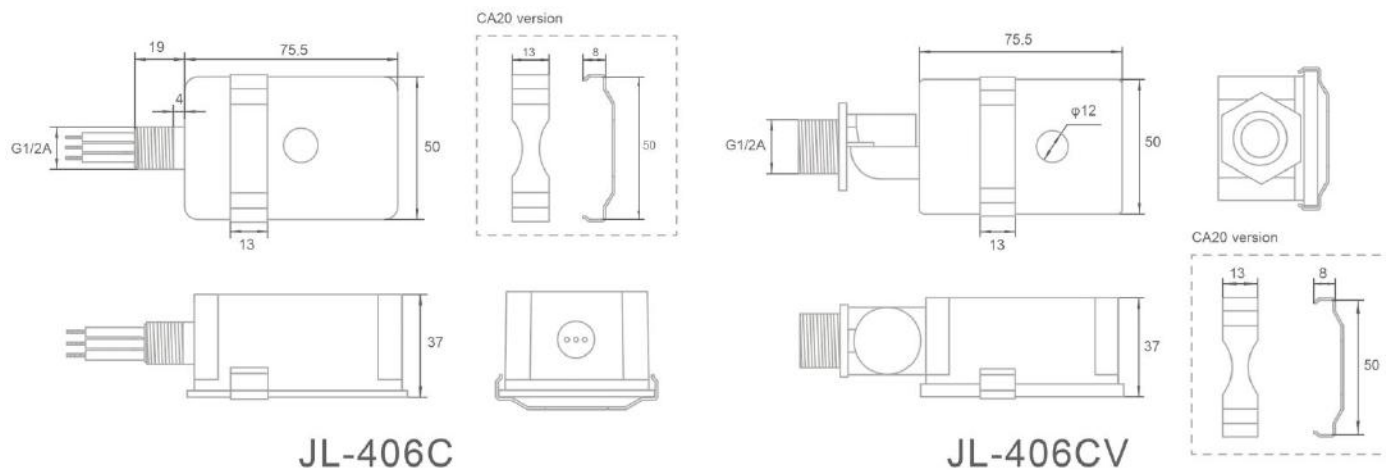


Product Summary

The Photocontrol JL-406C is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature. Especially, model JL-406CV provides a swivel to allow accurate orientation feature as well as a shielding bar provided to all the models to allow customer calibration to the on/off levels.

Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A.



Features

- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Swivel Integrated

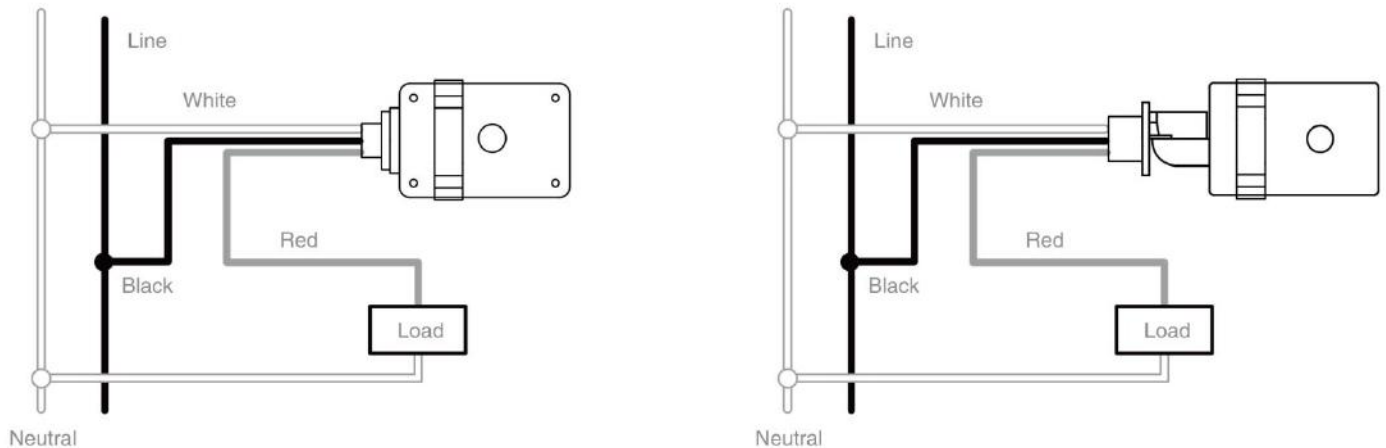
Specifications

Model No.	JL-406C	JL-406CV
Rated Voltage	120~277VAC	
Available Voltage Range	105~305VAC	
Rated Frequency	50/60Hz	
Rated Loading	500W Tungsten, 850VA Ballast 5A e-Ballast	
Power Consumption	1.8W@120VAC	
Operate Levels	10~20Lx Turn-On / 30~80Lx Turn-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Leads	AWG #18,105°C 4" min	
Failure Mode	Fail-Off	
Certifications	  	

Installation

Disconnect power, remove junction box cover, place the photocontrol through knockout hole and fasten with locknut. Wire according to the diagram in below.

Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

Ordering Information

JL-406C V 18 04 M CA20

	1	2	3	4	5
JL-406C	V	18	04	M	CA20

1: V(option) =swivel added

2: Lead Rating

18= 18 AWG, 105°C rated

18G= 18 AWG 150 °C rated

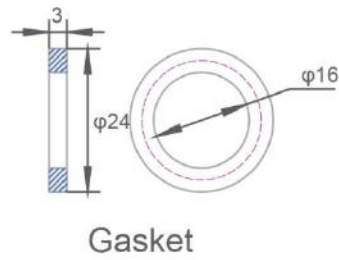
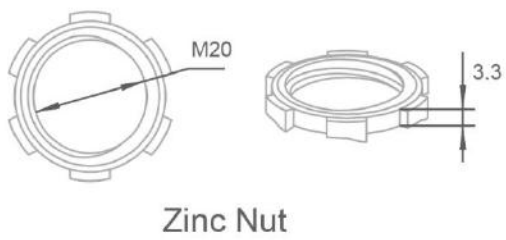
3: Lead Length

XX, in inches (04 min.)

4: M(option) = UL holographic label

5: CA20(option) = California Title 20

Assemblies



JL-408C

Conduit Wire-In Electronic Photocontrol



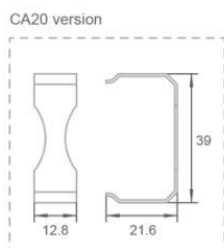
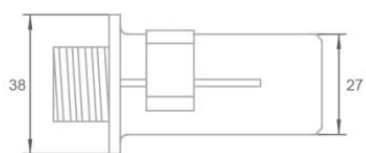
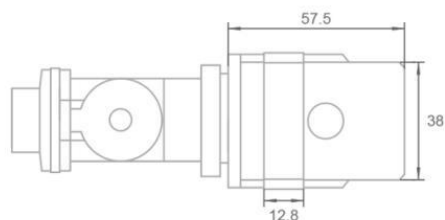
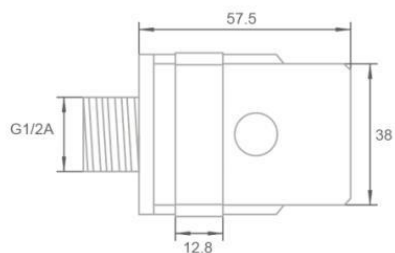
Product Summary

The photocontrol JL-408C is applicable to control the street lighting, passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

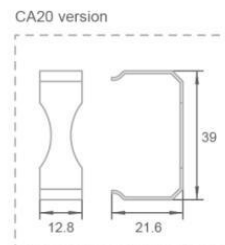
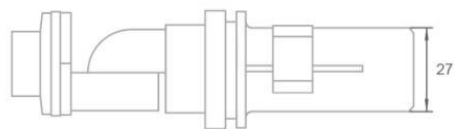
This product is designed with electronic circuits. Its quicker response with time delay of 3-10 seconds offers easy-to-test feature. Especially, model JL-408CV provides a swivel to allow accurate orientation feature as well as a shielding bar provided to all the models to allow customer calibration to the on/off levels.

Further, a preset 3-10 seconds time-delay might avoid mis-operation due to spotlight or lightning during the night time

This product has been listed by UL LLC and is comply with the Standard for Non-industrial Photoelectric Switches for Lighting Control UL773A.



JL-408C



JL-408CV

Features

- 3~10s Time-delay preventing redundant turning-off caused by headlights or lightning
- Customer calibration shielding bar
- Swivel Integrated

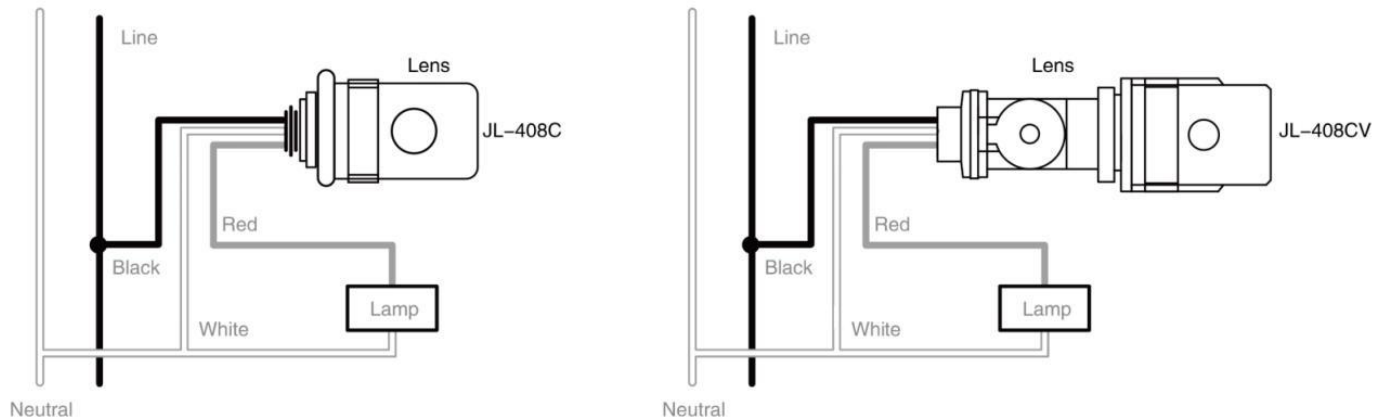
Specifications

Model No.	JL-408C	JL-408CV
Rated Voltage	120~277VAC	
Available Voltage Range	105~305VAC	
Rated Frequency	50/60Hz	
Rated Loading	500W Tungsten, 850VA Ballast 5A e-Ballast	
Power Consumption	1.8W@120VAC	
Operate Levels	10~20Lx Turn-On / 30~80Lx Turn-Off	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Leads	AWG #18,105°C 4" min	
Failure Mode	Fail-Off	
Certifications	  	

Installation

Disconnect power, remove junction box cover, place the photocontrol through knockout hole and fasten with locknut. Wire according to the diagram in below.

Do not install the photocontrol with the Photocell facing artificial or reflected light. This may cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few minutes to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

Ordering Information

JL-408C V 18 04 M CA20

	1	2	3	4	5
JL-408C	V	18	04	M	CA20

1: V(option) = shank

2: Lead Rating

18=18 AWG, 105°C rated

18G=18 AWG 150 °C rated

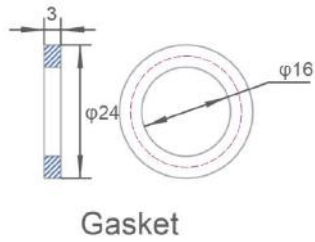
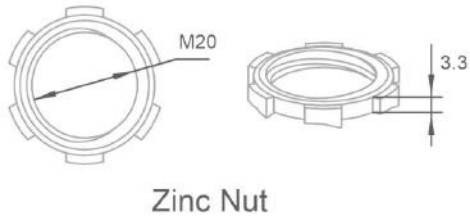
3: Lead Length

XX, in inches (04 min.)

4: M(option) =UL holographic label

5: CA20(option) = California Title 20

Assemblies



JL-428

Conduit Wire-In Digital Photocontrol (Zero cross +FCC)



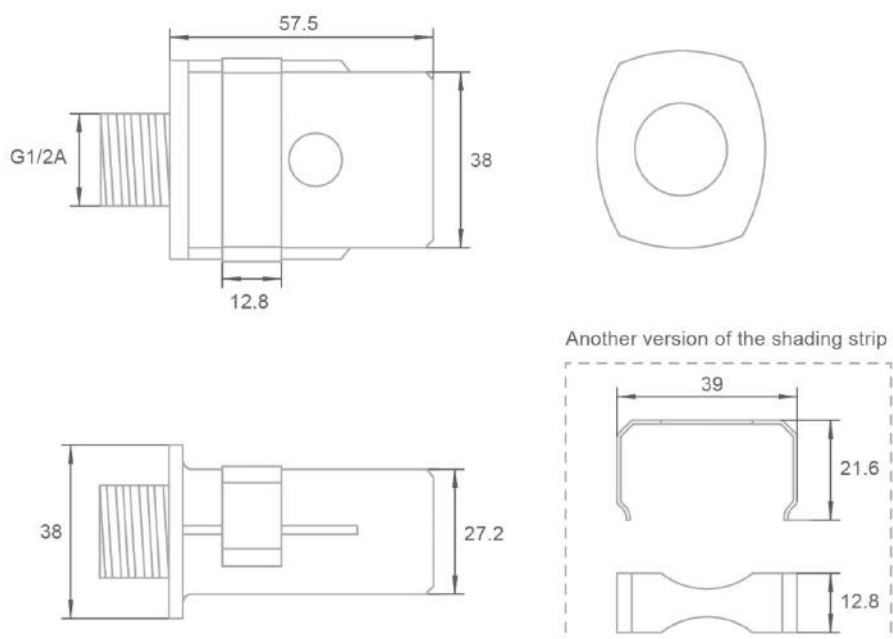
Product Summary

The photocontrol JL-428 series is applicable to control the passage lighting and doorway lighting automatically in accordance with the ambient lighting level.

This product is designed with electronic circuits with MCU incorporated. Its quicker response with time delay of 5 seconds offers easy-to-test feature while avoiding redundancy operation due to spotlight or lightening during night time. Especially, it supports midnight sleeping and reburning before dawn.

Optional Z version has zero-cross technology built-in for longer work life, while conforms FCC regulations.

Further, JL-428 provides surge protection feature up to 235J/5000A.



Features

- UL773A direct wire-in
- 90~305V Multi-Volts
- Fail-On / Fail-Off Modes Available
- Swivel Incorporated
- IR-Filtered Phototransistor Sensor
- Midnight Sleeping Available
- IP54 / IP65 protections Available
- Instant / Delayed Switching Available

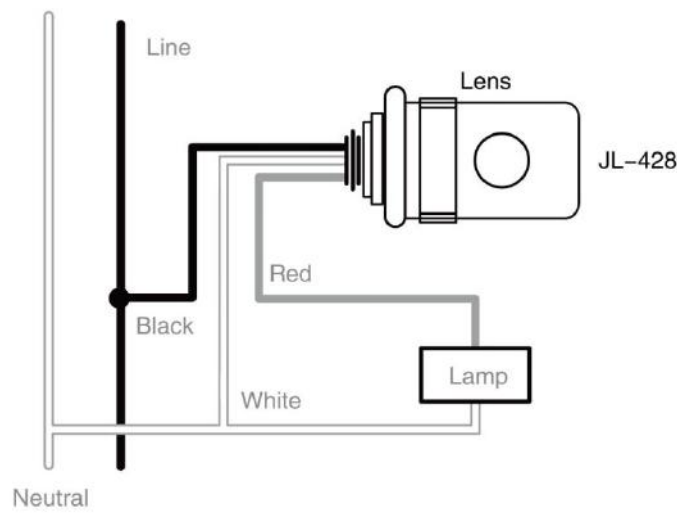
Specifications

Model No.	JL-428C	JL-428CZ
Rated Voltage	120~277VAC	
Available Voltage Range	105~305VAC	
Rated Frequency	50/60Hz	
Rated Loading	1000W Tungsten 1200VA Ballast @120VAC 1800VA Ballast @208-277VAC 8A e-Ballast @120VAC 5A e-Ballast @208-277VAC	
Power Consumption	0.5W Max.	
Operate Levels	16Lx Turn-On / 24Lx Turn-Off (customizable)	
Time-delay	5-10s (customizable)	
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Leads Length	AWG #16,AWM 1015 4" min	
Failure Mode	C4:Fail-Off C5:Fail-On	
Surge Protection (MOV)	●	
Zero Crossing	●	

FCC	●	N/A
Certifications	  	

Installation

Disconnect power, remove junction box cover, place the photocontrol in knockout hole and fasten with locknut. Wire according to the diagram in right hand.Do not install the photocontrol with the Photocell facing artificial or reflected light. This will cause the unit to cycle on and off at night.



Initial Testing

- It is normal for the SWITCH to take few seconds to turn off when first installed.
- To test “turn on” during daytime, cover its eye with opaque material.
- Do not cover with finger because light traveling through fingers may be great enough to keep the switch open.
- Test will take approximately 1 minutes.

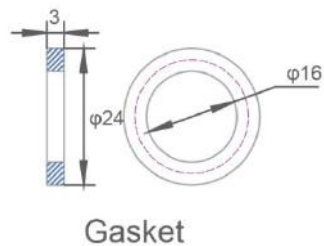
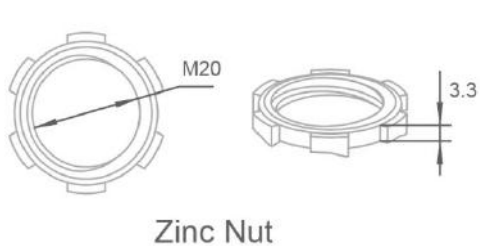
Ordering Information

JL-428CZ 16 04 M (16 05 24 05 T3.0) -CA20

	1	2	3	4	5	6	7	8	9	10
JL-428C	Z	16	04	M	16	05	24	05	T3.0	CA20

- 1: Z= Zero cross (option)
- 2: Lead Rating
 - 16= 16 AWG, 105°C rated
 - 16G= 16 AWG 150 °C rated
- 3: Lead Length
 - XX, in inches (04 min.)
- 4: M(option) =UL holographic label
- 5: Turn On Level in Lux
- 6: Turn On Time Delay in second
- 7: Turn Off Level in Lux
- 8: Turn Off Time Delay in second
- 9: Midnight Sleeping Time in hour (option)
- 10: CA20(option) = California Title 20

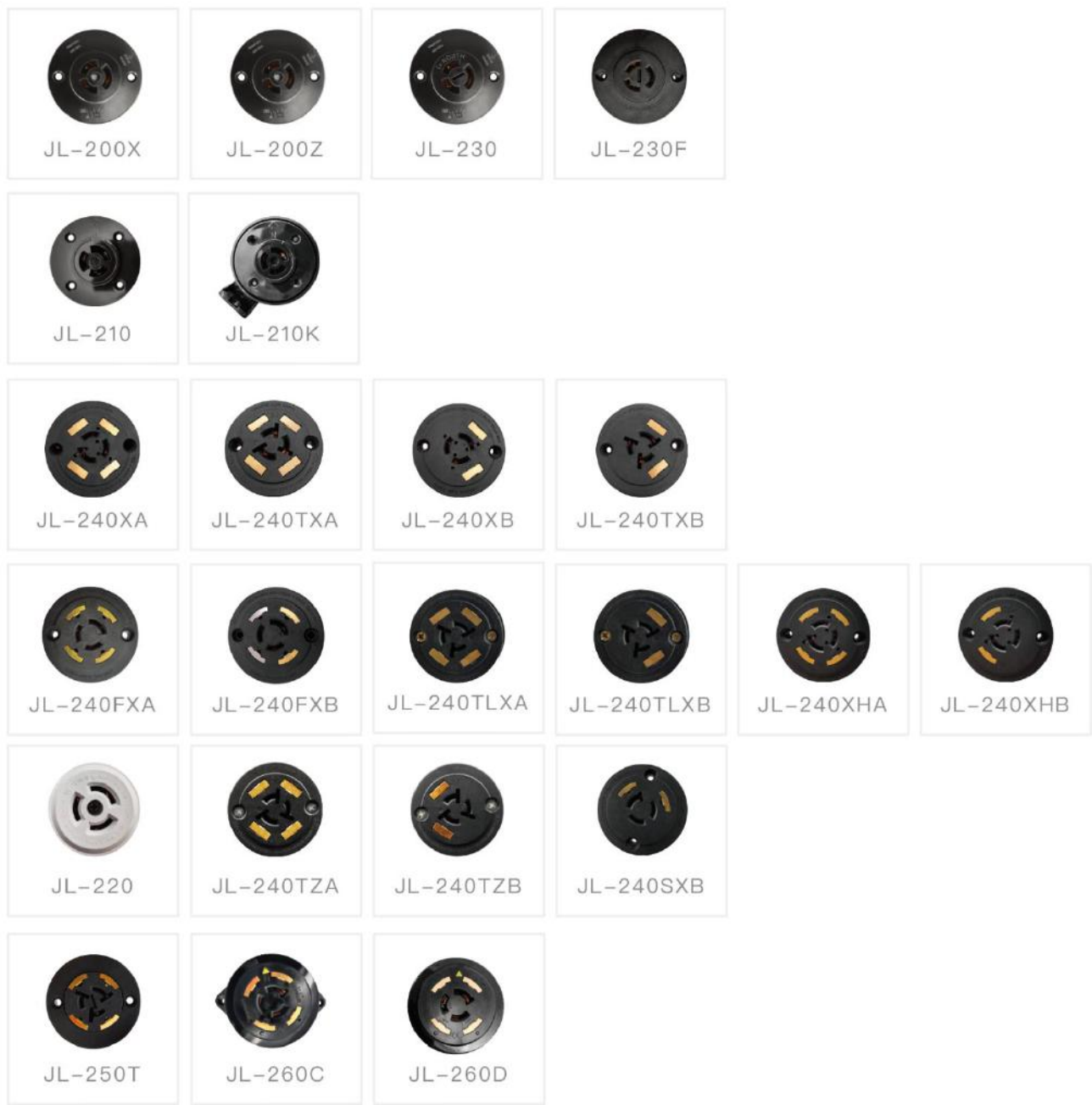
Assemblies



Photocontrol Receptacle NEMA Series

The receptacle meeting ANSI C136.10, or ANSI C136.41, or BS5972, are intended to have the lantern ready for accepting a photocontrol (PECU), which will allow the lantern automatically turned on dusk to down, for security purpose.

Recently, those PECUs integrated with IoT communication technology might further bring such a lantern into the modern time with remote management availabilities.

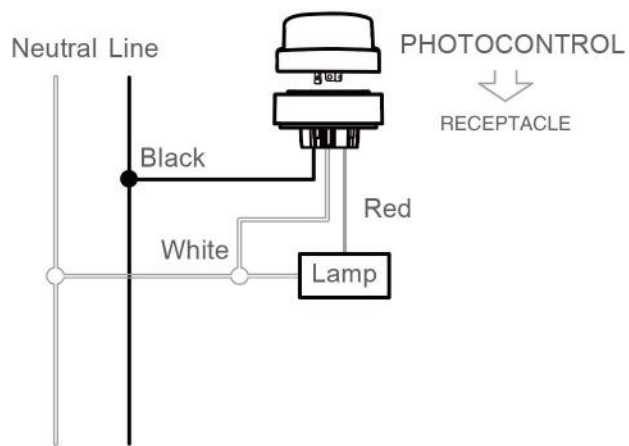


The Family

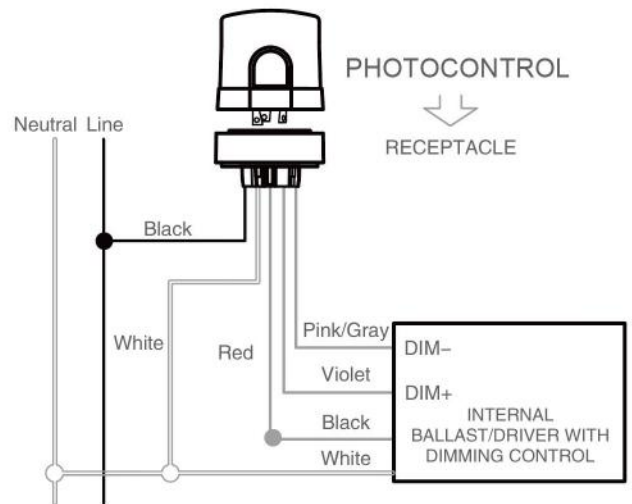
Model No.	North-Mark	Rotation Support	Dimming	Rotary Limit	Lantern Assm./
-----------	------------	------------------	---------	--------------	----------------

	(US/UK)		Pad No.	Function	Wall Mount
JL-200X	US	N	-	-	L
JL-200Z	US	Y	-	N	W
JL-210	UK	-	-	-	L
JL-210K	UK	-	-	-	W
JL-220	US	Y	-	Y	L
JL-230	US	Y	-	Y	L
JL-230F	US	Y	-	Y	L
JL-240XA	US	N	4	-	L
JL-240TXA	US	N	4	-	L
JL-240FXA	US	Y	4	-	L
JL-240TLXA	US	Y	4	Y	L
JL-240XHB	US	N	2	-	L
JL-240TXB	US	N	2	-	L
JL-240FXB	US	N	2	-	L
JL-240TLXB	US	Y	2	Y	L
JL-240XHA	US	N	4	-	L
JL-240XHB	US	N	2	-	L
240SXB	US	N	2	-	L
JL-240TZ	US	Y	4	N	W
JL-250T	US	Y	4	Y	L
JL-260C	US	Y	4	Y	W
JL-260D	US	Y	4	Y	L

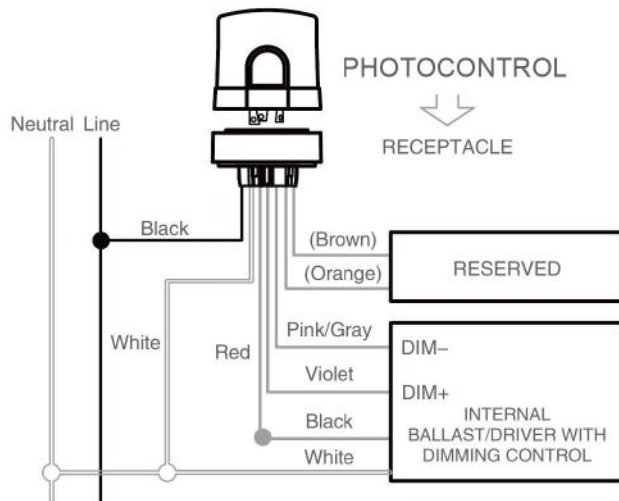
Wiring Diagram



C136.10 (3P)



C136.41 (5P)



C136.41 (7P)

JL-200

NEMA 接口 旋锁式光控开关插座 (NEMA 3P)

JL-200X



或



JL-200Z



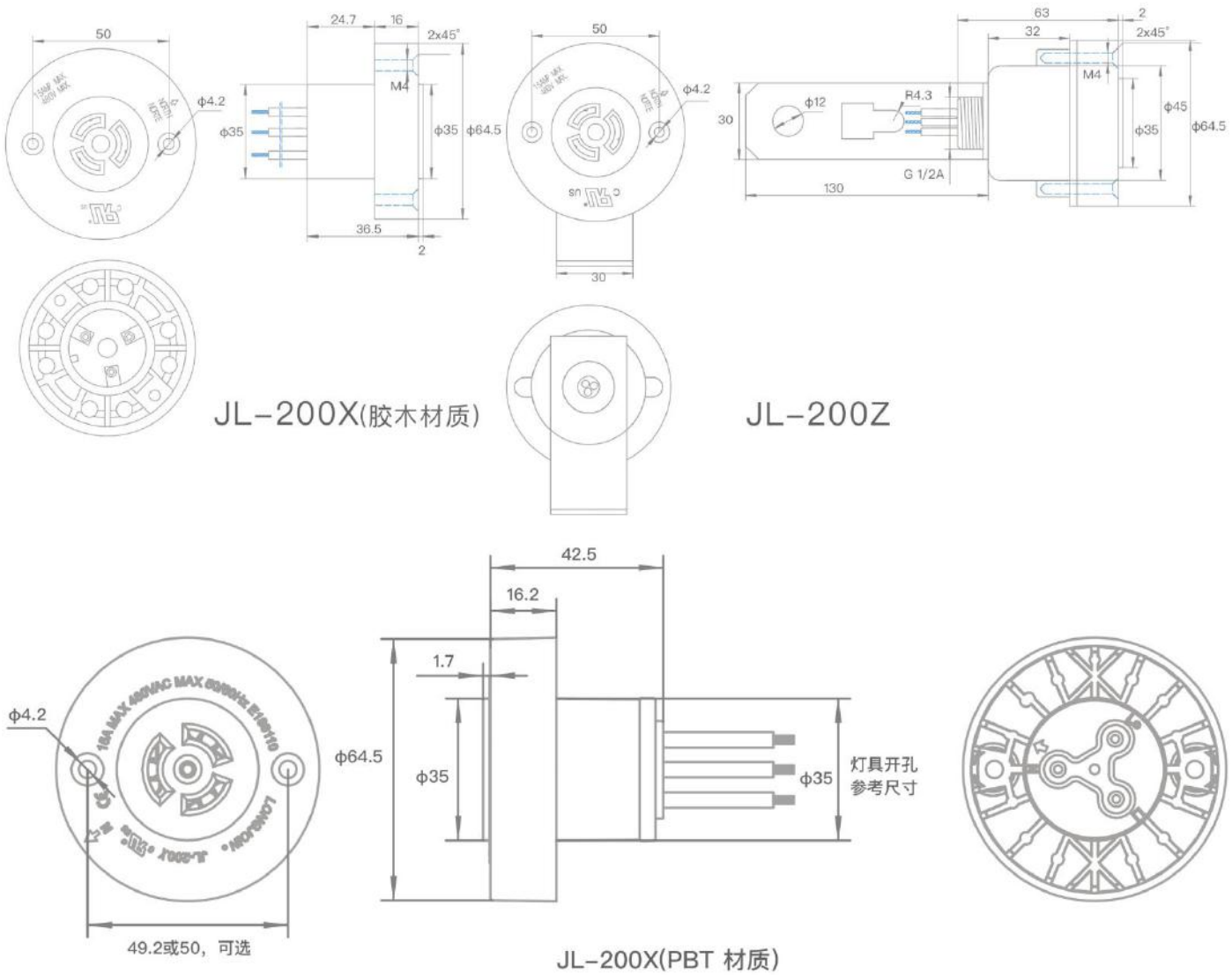
产品介绍

JL-200 旋锁式光控开关插座系列产品均为户外灯具设计，用于接受旋锁式光控器/开关对灯具电源管控。

该产品提供三个锁扣端子，满足 ANSI C136.10 和 ANSI/UL773 区域照明使用插入式、旋锁式光控器标准要求

*Z 型为加装后盖、室外电缆线版本

视线稿图



产品特点

- PBT 材质或胶木材质
- 硅胶垫圈，防水性能更佳

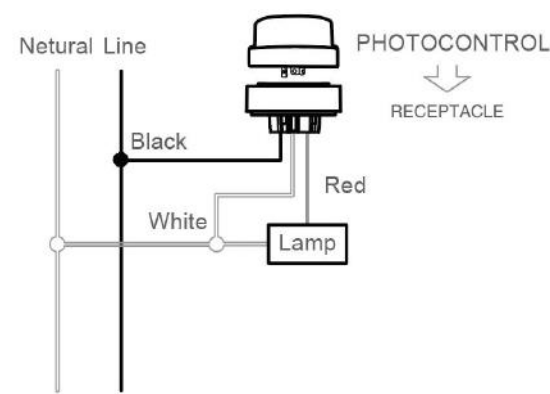
参数表

产品编号	JL-200X	JL-200Z
功率电压范围	0~480VAC	

额定频率		50/60Hz	
额定负载		15 A	
工作温度		-40°C ~ +70°C	
工作湿度		96%	
配件	后支架	—	●
	锌螺母	—	●
	固定支架	—	●
导线长度		6" 最短	
导线规格		AWG#12/14/16 AWG#18(non-UL)	AWG#12/14 AWG#16/18(non-UL)
电缆线路 (IP65)		-	Optional
认证		ANSI C136.10-2010 (仅 RS 型)          	

安装说明

- 断开电源
- 根据下图连接插座
- 插座顶部指示北方的箭头用于帮助确定正确的方向
- 如有必要，在现场固定安装时调整插座位置



产品编码表

JL-200X-14-06 -N1 -RS -C -L2-K49

	1	2	3	4	5	6	7	8
JL-200	X	14	06	N1	RS	C	L2	K49

1: 型号:

X=整体安装, 无后盖

Z=壁挂式安装, 带后盖和锌螺母

2: 导线规格

14=14 AWG, 105°C 耐温

14G=14 AWG 150 °C 耐温

12=12 AWG, 105°C 耐温

12G=12 AWG 150 °C 耐温

16=16 AWG, 105°C 耐温

16G=16 AWG 150 °C 耐温

18=18 AWG, 105°C 耐温

18G=18 AWG 150 °C 耐温

3: 导线长度

06 = 6 英寸 (150 毫米) 可定制

4: N1=3 毫米硅胶垫圈 (仅适用于 JL-200X)

N12=12 毫米硅胶垫圈 (仅适用于 JL-200X)

N3=3 毫米多孔硅胶垫圈仅 (适用 JL-200X PBT 材质版本)

5: R=带 O 形圈的出口盖 (仅适用于 JL-200X 的选项)

RS=带 O 形圈的出口盖, 并用胶水密封 (仅适用于 JL-200X 的选项)

6: C=室外电缆(仅适用于 JL-200X 的选项)

CWP=带防水螺母的室外电缆(仅适用于 JL-200X 的选项)

空=带锌螺母和垫圈的导线

7: L=铝支架

T=铁支架

8: K49=螺钉安装孔孔心距 49 (PBT 材质版本)

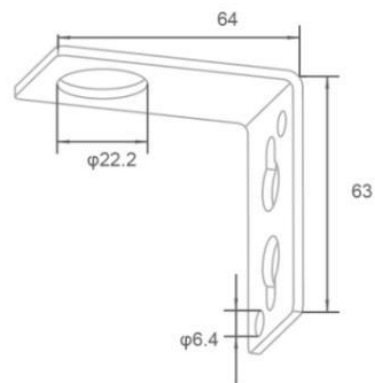
K50=螺钉安装孔孔心距 50 (PBT 材质版本)

*有关尺寸详情, 请参阅下面的支架装配图

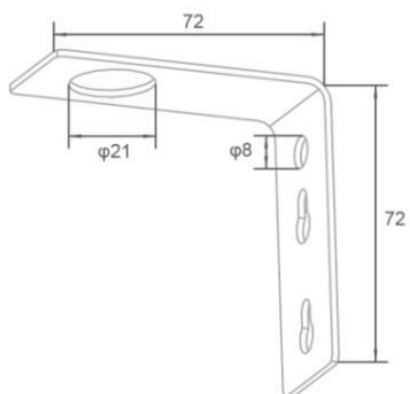
配件图



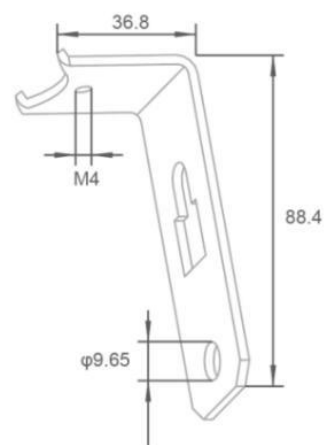
L2
(长短臂铝支架)



L3
(等臂铝支架)



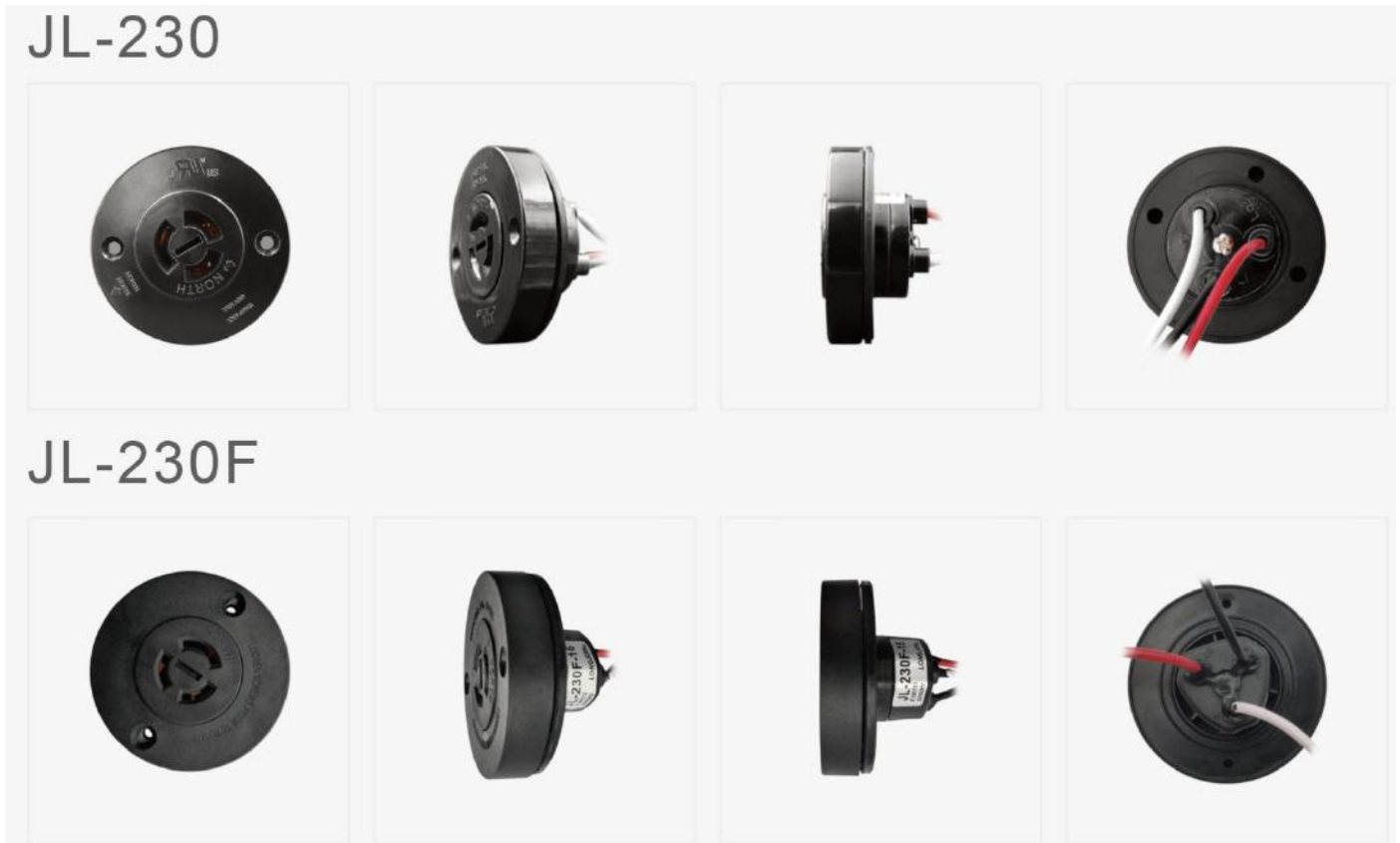
T1
(等臂铁支架)



T2
(专用于200X的开叉铁支架)

JL-230

Photocontrol receptacle (Rotatable)

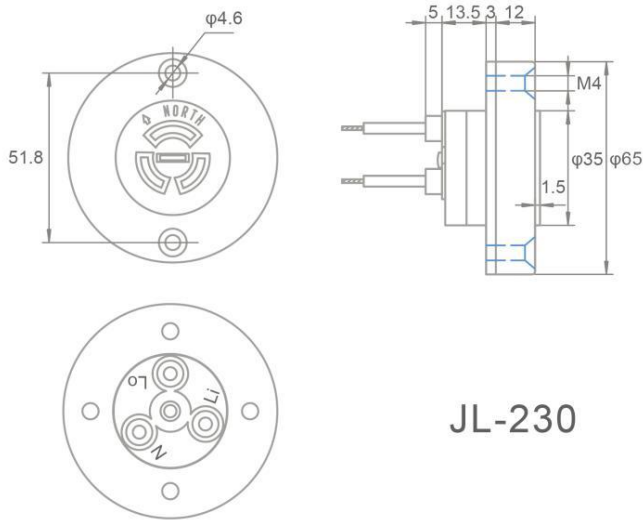


Product Summary

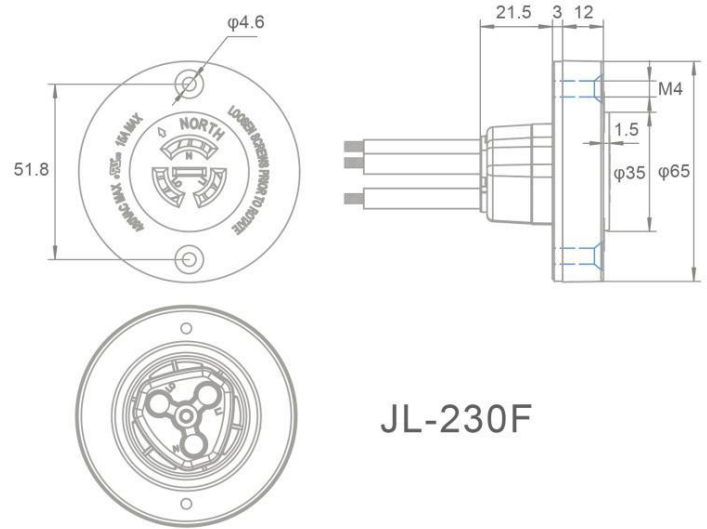
All the JL-230 series receptacles are intended to be pre-mounted onto those lanterns designed to fit an ANSI C136.10 twist-lock photocontrol.

Especially , JL-230F is intended to prevent water entrance through the wire strands.

This series also offers 360° rotation limiting feature to conform ANSI C136.10 requirements, in case rotatable.



JL-230



JL-230F

Features

JL-230

- 2 or 4 screws holes available
- Bakelite body for long-life service
- Nylon holder prevents cracks
- The screw can be loosened to find the north, making it convenient for the installation of the light controller (default north direction during installation), avoiding the decline of the light sensitive components of the light controller and extending its service life

JL-230F

- The screw can be loosened to find the north, making it convenient for the installation of the light controller (default north direction during installation), avoiding the decline of the light sensitive components of the light controller and extending its service life
- Built in waterproof ring to improve socket waterproofing

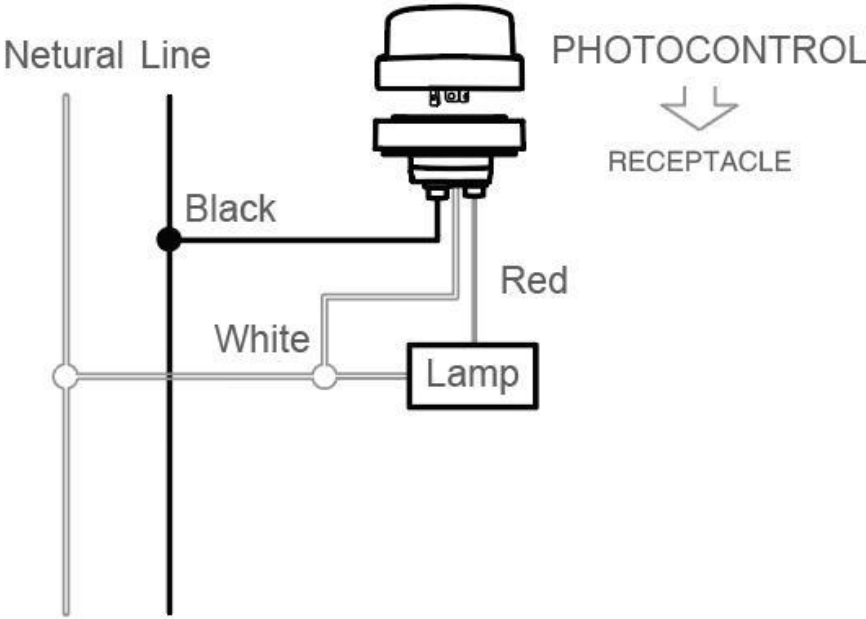
Specifications

Model No.	JL-230	JL-230F
Rated Voltage	480VAC Max	
Rated Frequency	50/60Hz	
Lead	16AWG,14AWG 6" min	

Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Load Rating	15 A	
Holding Cover	Nylon	PBT
Receptacle	Phenolic (Bakelite)	PBT
Contact	H62 Brass	
Gasket	Silicon Rubber	
Cable Line	●	-
IP65	●	
Certifications	ANSI C136.10-2010 	

Installation

Disconnect power; wire the receptacle according to the diagram in below.



An arrow indicating NORTH on the top of the receptacle is used to assist correct orientation. Adjust the receptacle position by loosening screws and fasten them after its redirected.

Ordering Information

JL230 16 06 -RS-C N2

	1	2	3	4	5	6
JL-230	F	16	06	RS	C	N2

1: Model Number

F=Waterproof Version

2: Lead Rating

16=16 AWG, 105°C rated

14=14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16G=16 AWG 150 °C rated

3: Lead Length

06= 6" (Customizable, 06 Min.)

4: R=Outlet cover with O-ring (option for JL-230 only)

RS= Outlet cover with O-ring & Sealed with glue (option for JL-230 only)

5: C = Outdoor wiring cable

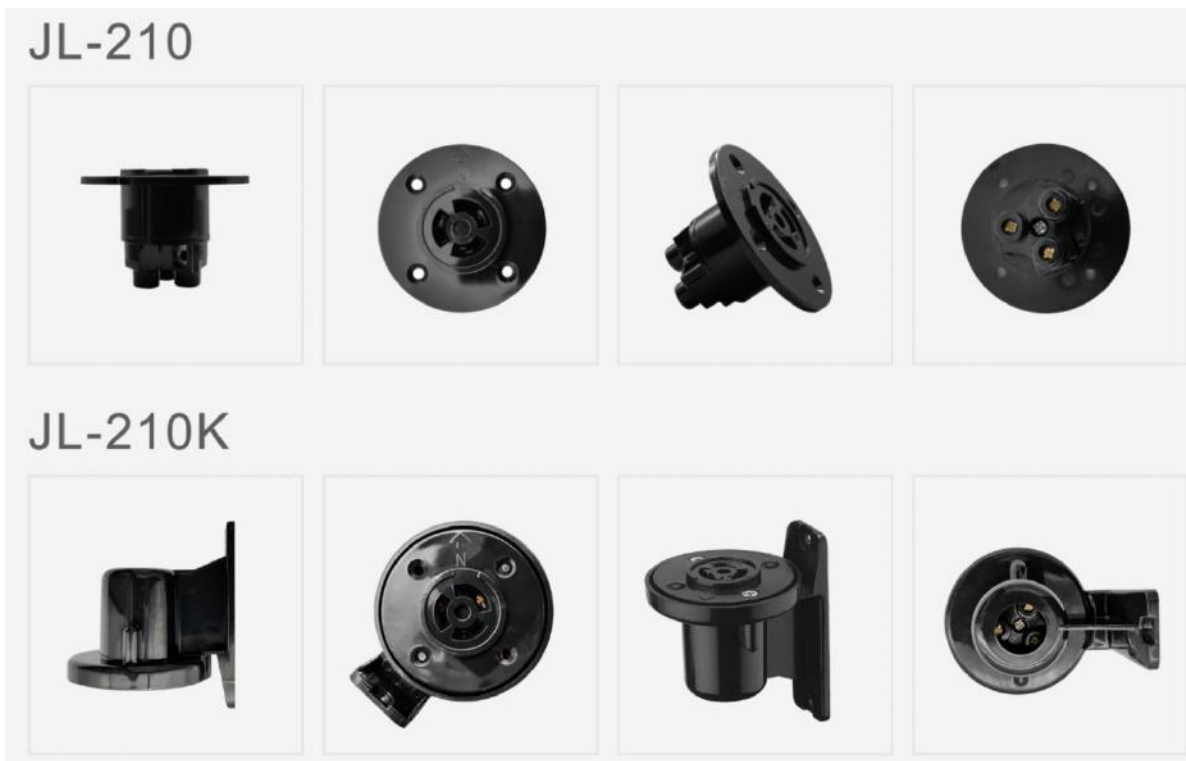
null= Appliance wiring wire

6: N2=2-hole cover ring / 4-hole silicone gasket

N4=4-hole cover ring / 4-hole silicone gasket

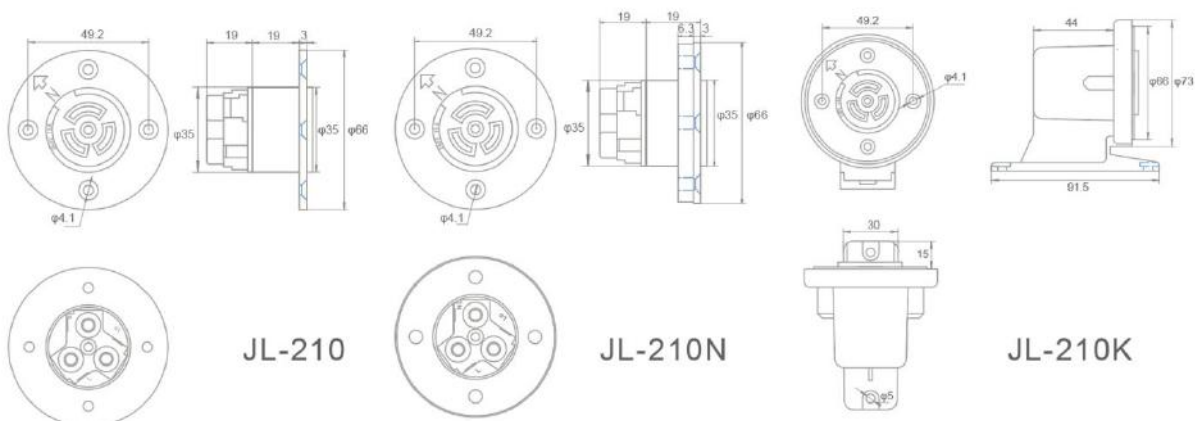
JL-210

PECU Receptacle (BS version)



Product Summary

The JL-210 series PECU receptacles are designed for the lanterns those without an BS5972 receptacle. JL-210 is used for lantern assembling, and JL-210K is used for wall-mounted separately.

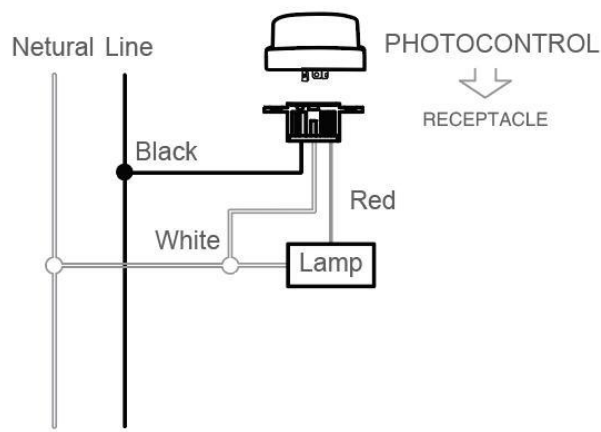


Specifications

Model No.	JL-210
Power Volt Range	0~480VAC
Rated Frequency	50/60Hz
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Receptacle	PC
Certifications	 

Installation

Disconnect power; wire the receptacle according to the diagram in below.



An arrow indicating NORTH on the top of the receptacle is used to assist correct direction.
Adjust the receptacle position if necessary.

Ordering Information

JL210 N

JL-210	1
	N

- 1: N=N6 rubber gasket enclosed
- K=with mounting bracket kit
- Null=receptacle only

JL-240X/TX

Fixed Twist-lock dimming receptacle (NEMA 7P/5P)

JL-240XA



JL-240TXA



JL-240XB



JL-240TXB

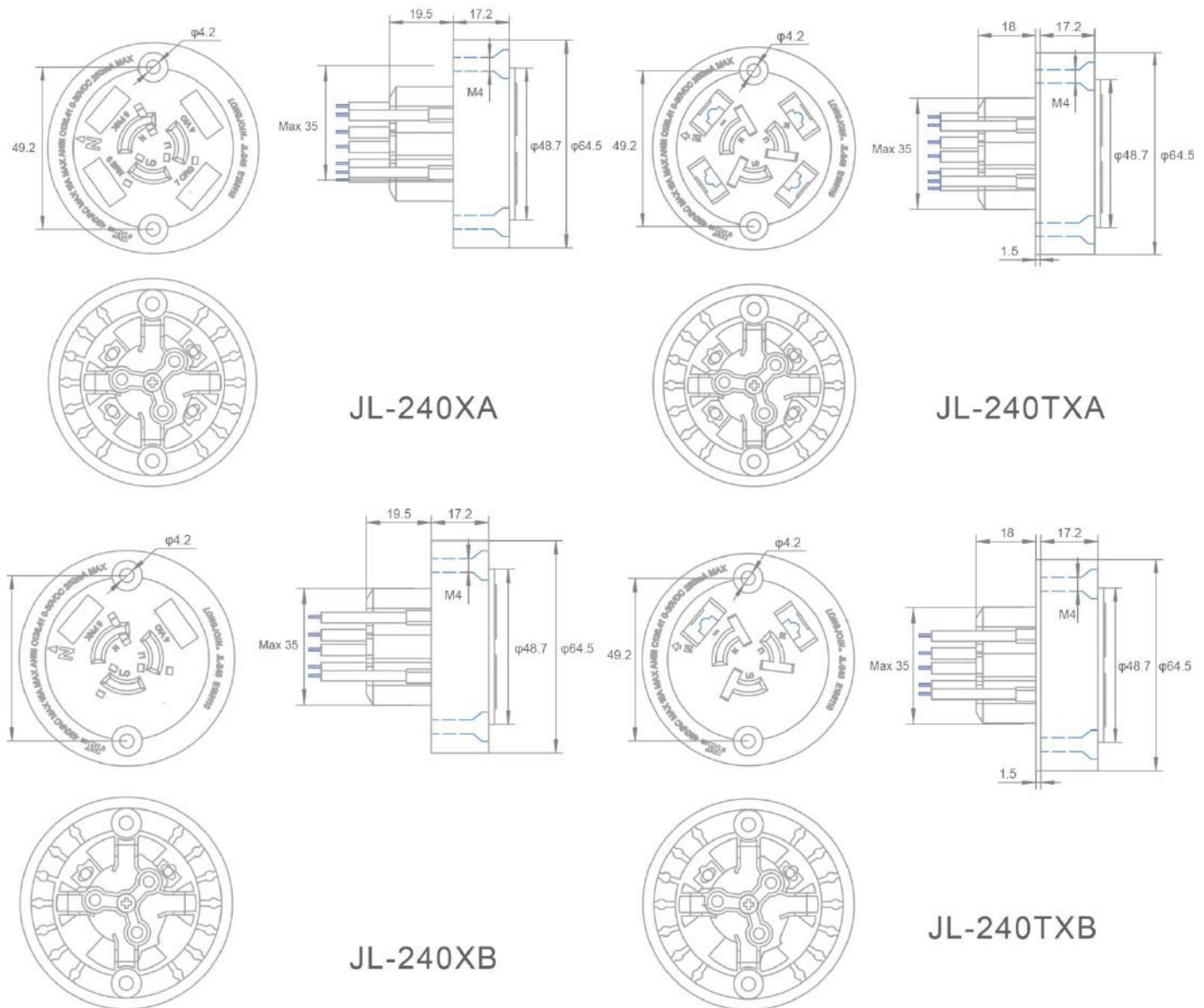


Product Summary

All the JL-240 series photocontrol receptacles were designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. This series conform newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 or 4 wiring leads at rear side for signal connection.

This series also offers 360° rotation limiting feature to conform ANSI C136.10 requirements, in case rotatable.



Features

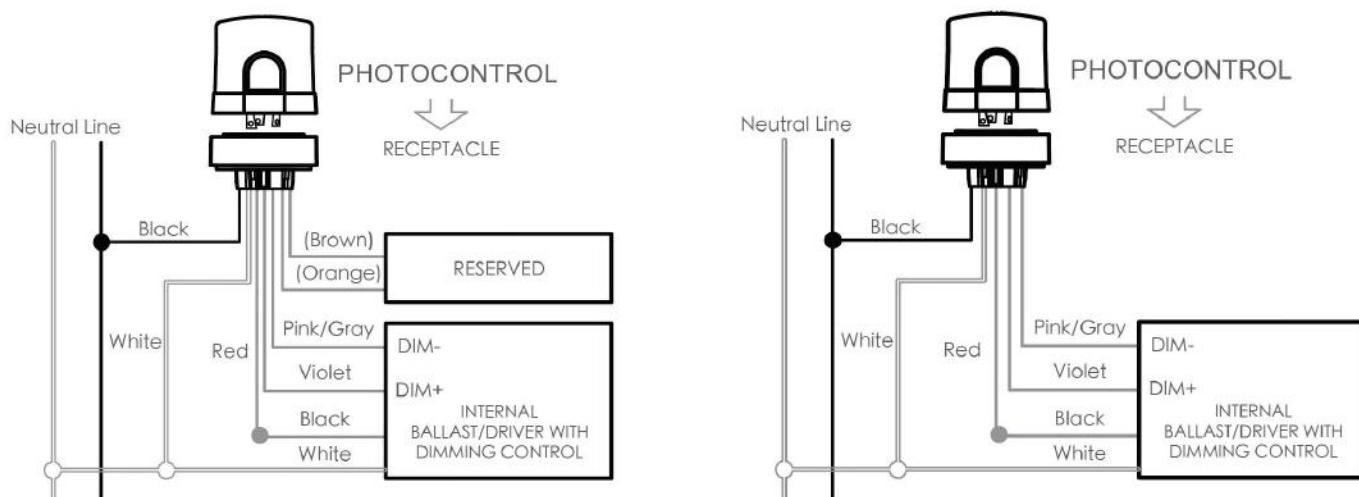
- Glass-Fiber strongen PBT
- Gilded Pads made from phophor bronze Nickel plated and gilded over 0.7um
- Gold plating per ASTM B 488
- Silicone gasket offered
- TPE gasket gathered to flange for easier assembling

Specifications

Model No.	JL-240X/TX
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Load Rating	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG,14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Outdoor Wiring Cable	●
Certifications	ANSI C136.41-2013 

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-240X A 14 12 R -7P N1 S C

	1	2	3	4	5	6	7	8	9
JL-240	X	A	14	12	R	7P	N1	S	C

1: Model Number

X = gasket separated version

TX = gasket integrated version

2: A= 4 Dimming pads

B=2 Dimming pads

3: Power Lead Rating

14= 14 AWG, 105°C rated

14G= 14 AWG 150 °C rated

16= 16 AWG, 105°C rated

16G= 16 AWG 150 °C rated

16S= 16 AWG Double isolated wire (Class II)

4: 12= 12" (Customizable, 06 Min.)

5: R=rear holder

6: 7P=7 wires

5P=5 wires

7: N1=gasket (for JL-240X only)

8: S= wire outlets glued

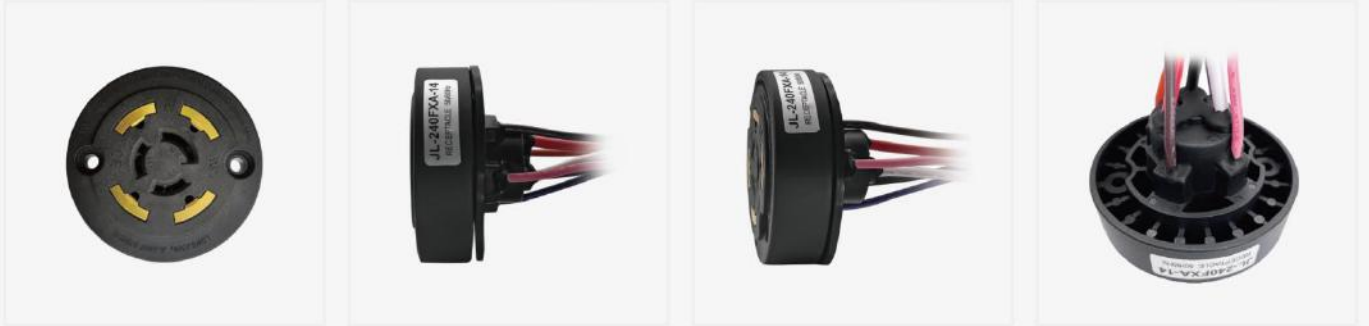
9: C= Outdoor wiring cable

null= Appliance wiring wire

JL-240F

Waterproof Twist-lock Dimming receptacle (NEMA 7P/5P)

JL-240FXA



JL-240FXB

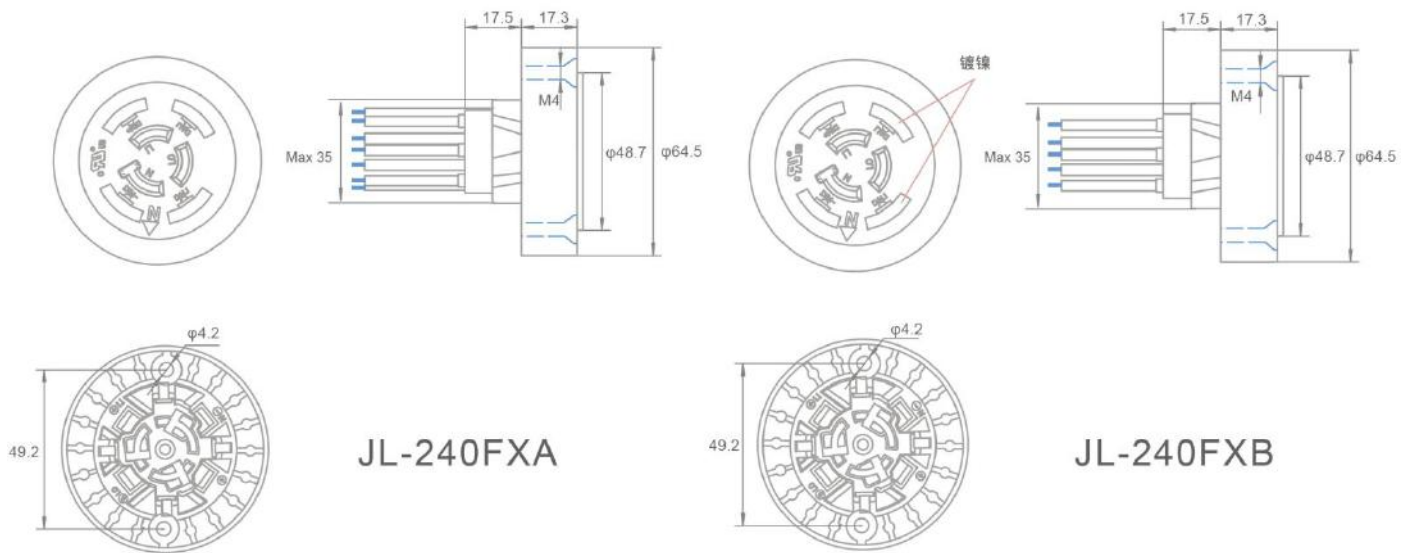


Product Summary

All the JL-240F series photocontrol receptacles were designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. This series conform newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 or 4 wiring leads at rear side for signal connection.

Especially, JL-240F offers screw hole O-rings while internally and externally sealed with silicone glue, to approach extreme waterproof feature.



Features

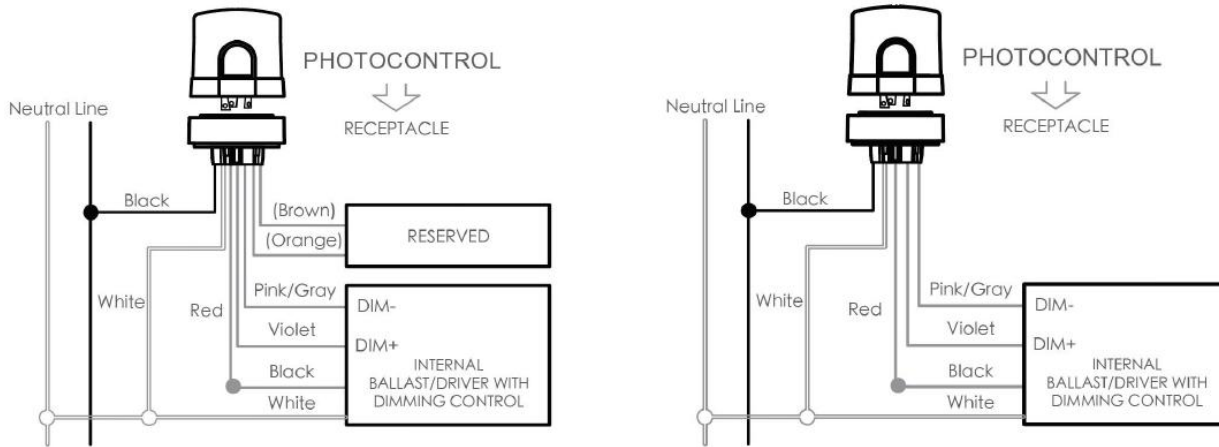
- Body made from polybutylene terephthalate
- Contacts made from phosphor bronze
- Gold pad made from Nickel plated phosphor bronze with gold plating per ASTM B 488
- Silicone gasket offered
- Extra waterproof performance enhanced

Specifications

Model No.	JL-240F
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Power Loading	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG,14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Outdoor Wiring Cable	●
Certifications	ANSI C136.41-2013

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-240F X A 14 12 R -7P N1

	1	2	3	4	5	6
JL-240FX	A	14	12	R	7P	N1

1: A=4 Dimming pads

B=2 Dimming pads and 2 decorative pads

2: Power Lead Rating

14= 14 AWG, 105°C rated

14G= 14 AWG 150 °C rated

16= 16 AWG, 105°C rated

16G= 16 AWG 150 °C rated

16S= 16 AWG Double isolated wire (Class II)

3: 12= 12" (Customizable, 06 Min.)

4: R=rear holder

5: 7P=7 wires

5P=5 wires

6: N1=gasket

JL-240TL

Rotatable Twist-Lock Dimming Receptacle

JL-240TLXA



JL-240TLXB

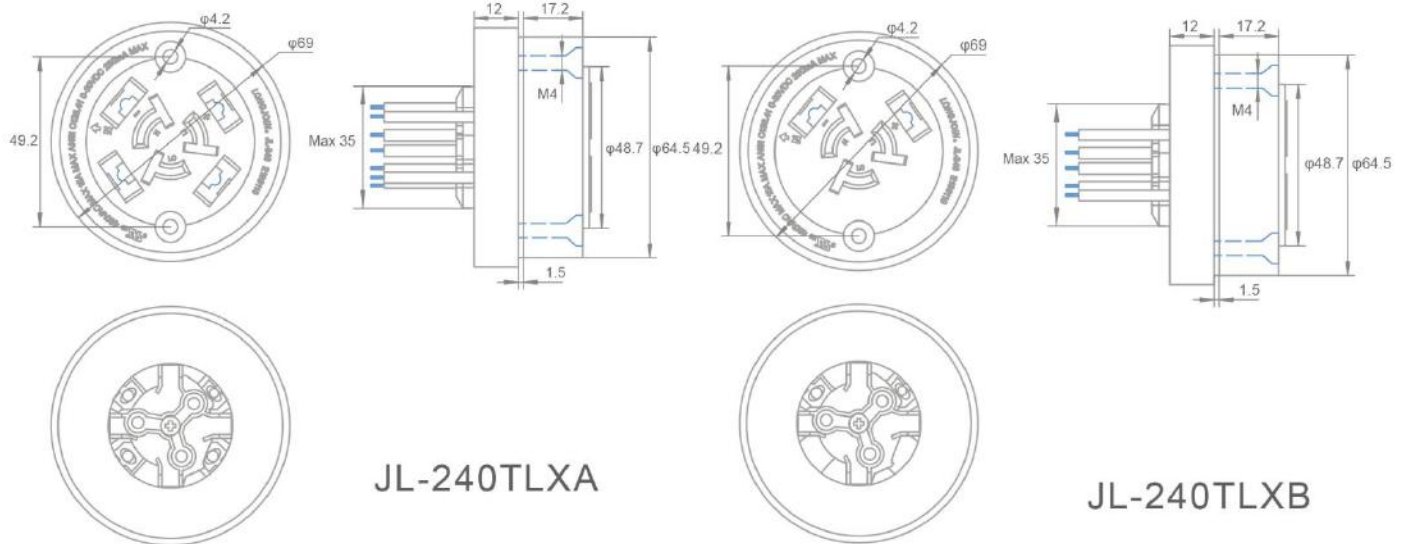


Product Summary

All the JL-240TL series photocontrol receptacles were designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. This series conform newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 or 4 wiring leads at rear side for signal connection.

This series also offers 360° rotation limiting feature to conform ANSI C136.10 requirements, in case rotatable.



Features

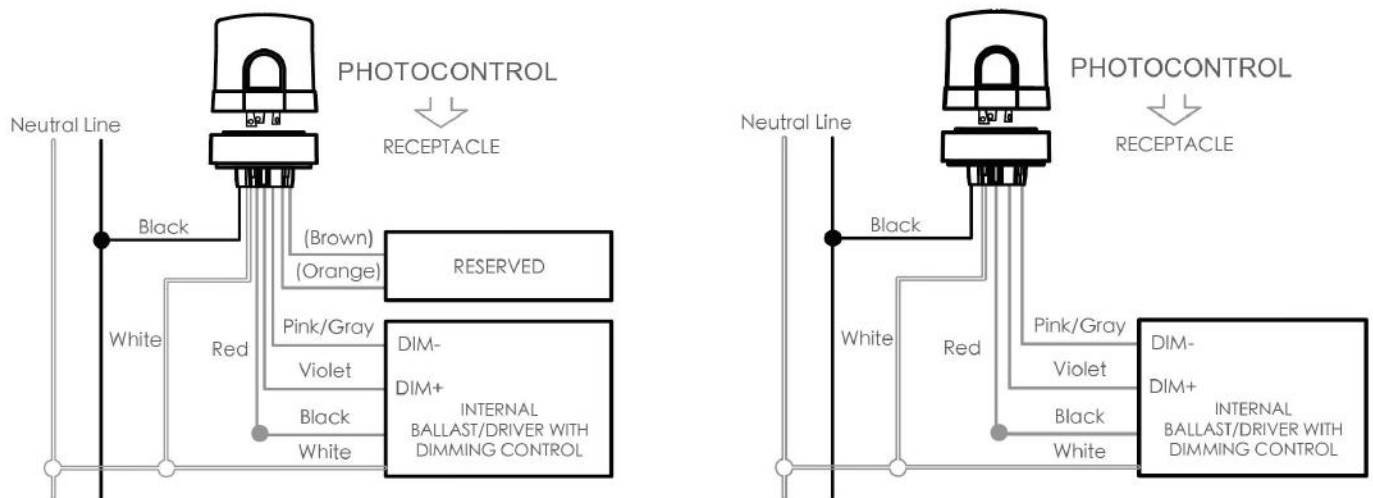
- Body made from polybutylene terephthalate
- Rotation parts made from polycarbonate
- Contacts made from phosphor bronze
- Gold pad made from Nickel plated phosphor bronze with gold plating per ASTM B 488
- Thermoplastic Elastomer gasket integrated

Specifications

Model No.	JL-240TL
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Power Loading	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG,14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Certifications	ANSI C136.41-2013     

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-240TLX A 14 12 R 7P

1	2	3	4	5	6
JL-240TLX	A	14	12	R	7P

2: A=4 Dimming pads

B=2 Dimming pads

3: Power Lead Rating

14=14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16=16 AWG, 105°C rated

16G=16 AWG 150 °C rated

16S=16 AWG Double isolated wire (Class II)

6: 12= 12" (Customizable, 06 Min.)

5: R=rear holder

6: 7P=7 wires

5P=5 wires

JL-240XHA/XHB

Fixed Twist-lock dimming receptacle (NEMA 7P/5P)

Gold pad narrowed version

JL-240XHA



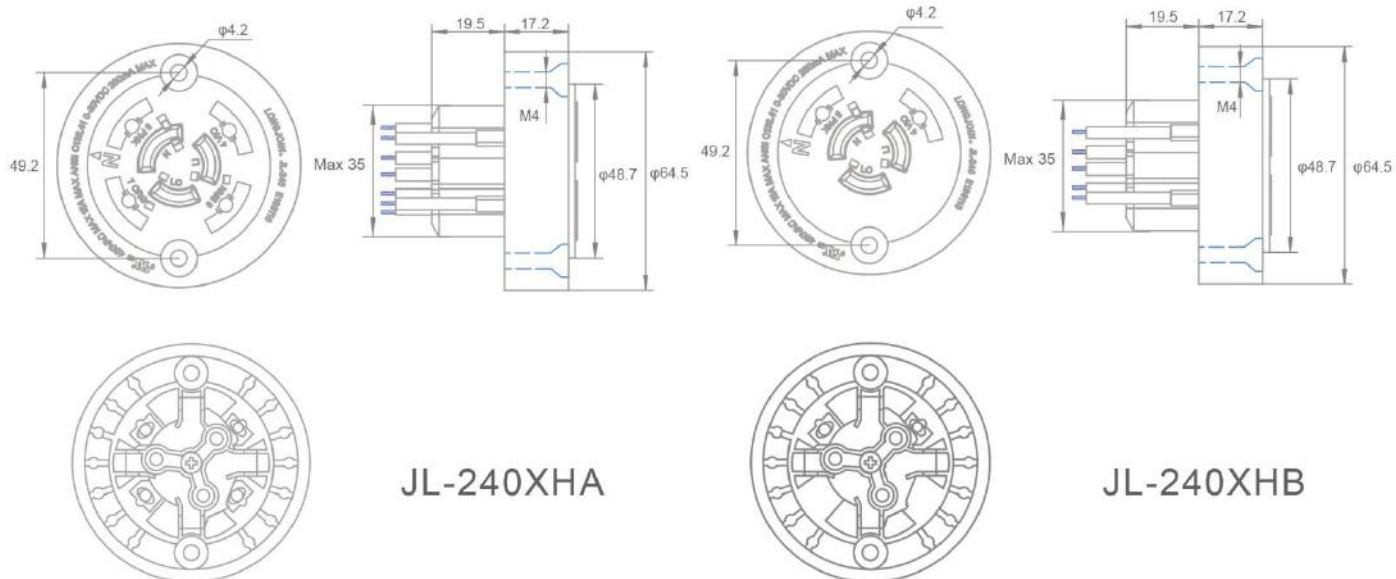
JL-240XHB



Product Summary

All the JL-240XH series photocontrol receptacles were designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. This series conform newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 or 4 wiring leads at rear side for signal connection.



JL-240XHA

JL-240XHB

Features

- Glass-Fiber strongen PBT
- Gilded Pads made from phosphor bronze Nickel plated and gilded over 0.7um
- Gold plating per ASTM B 488
- Silicone gasket offered
- Gold pad narrowed for competitive cost

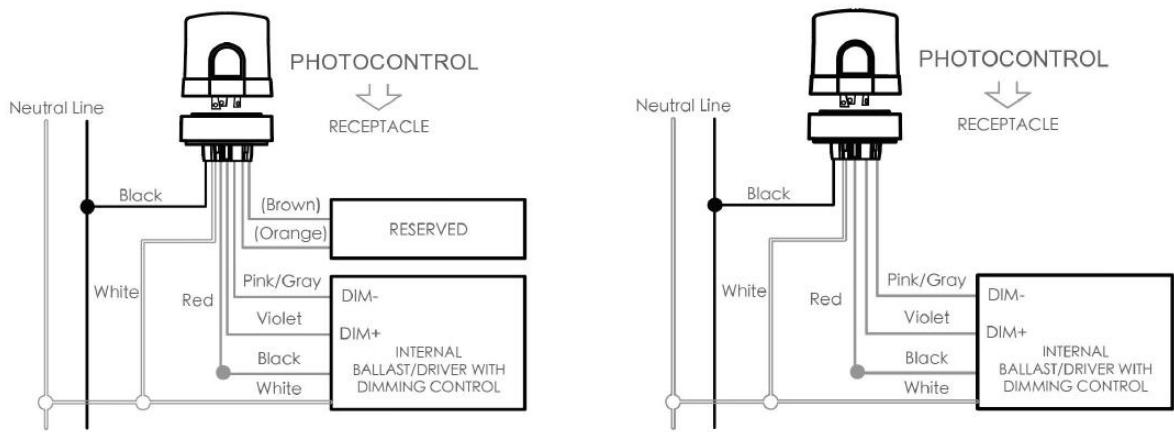
Specifications

Model No.	JL-240XH
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Load Rating	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG/14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Outdoor Wiring Cable	●

Certifications	ANSI C136.41-2013
	    

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-240X H A 14 12 R -7P N1 S C

1	2	3	4	5	6	7	8	9	10
JL-240X	H	A	14	12	R	7P	N1	S	C

- 3: A=4 Dimming pads
B=2 Dimming pads
- 4: Power Lead Rating
14= 14 AWG, 105°C rated
14G=14 AWG 150 °C rated
16= 16 AWG, 105°C rated
16G=16 AWG 150 °C rated
16S= 16 AWG Double isolated wire (Class II)
- 5: 12= 12" (Customizable, 06 Min.)
- 6: R= rear holder

7: 7P=7 wires

5P=5 wires

8: N1=gasket

9: S = wire outlets glued

10: C = Outdoor wiring cable

null= Appliance wiring wire

JL-220

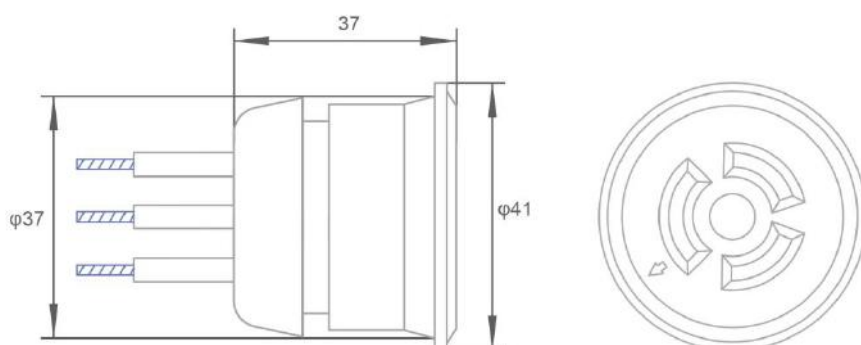
Compact Photocontrol Receptacle



Product Summary

This photocontrol receptacle is specially designed for the lanterns die-casted with a rising platform intended to accept a twist-lock photocontrol for power management.

It offers 360° rotation limiting feature to conform ANSI C136.10 requirements, with the die-cast support.

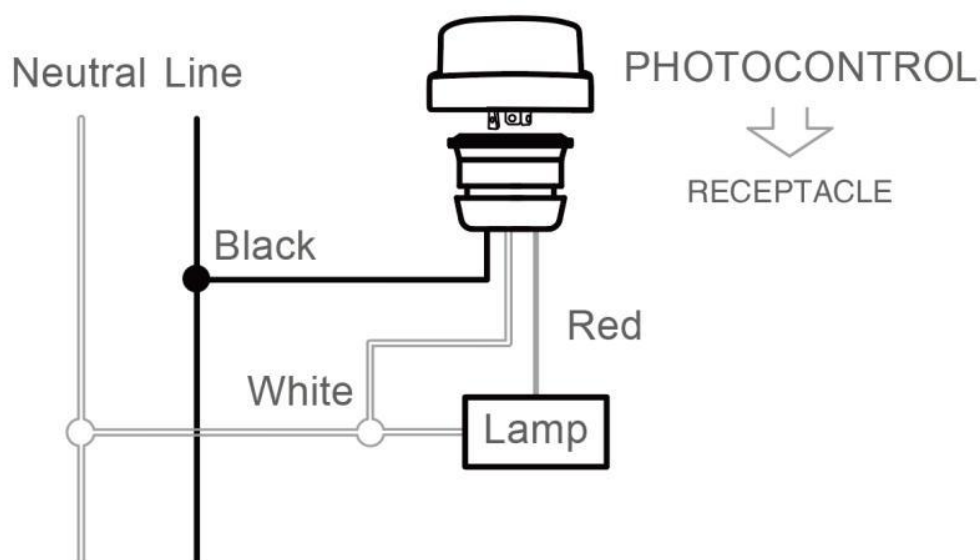


Specifications

Model No.	JL-220-14/16	JL-220-18
Applicable Volt Range	0~480VAC	
Rated Frequency	50/60Hz	
Load Rating	15A	12A
Lead	16AWG/14AWG 6" min	18AWG 6" min
Ambient Temperature	-40°C ~ +70°C	
Related Humidity	96%	
Certifications	  	

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top of the receptacle is used to assist correct orientation.

Adjust the receptacle position if necessary, by loose the central screw and retighten it, when the fixture is installed in field.

Ordering Information

JL-220 14 06 H

JL-220	1	2	3
	14	06	H

1: Power Lead Rating

14= 14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16= 16 AWG, 105°C rated

16G=16 AWG 150 °C rated

18= 18 AWG, 105°C rated

18G=18 AWG 150 °C rated

2: 06= 6" (Customizable, 06 Min.)

3: H=black

J= white

JL-240TZ

Wall Mount Twist-lock dimming receptacle (NEMA 7P/5P)

JL-240TZA



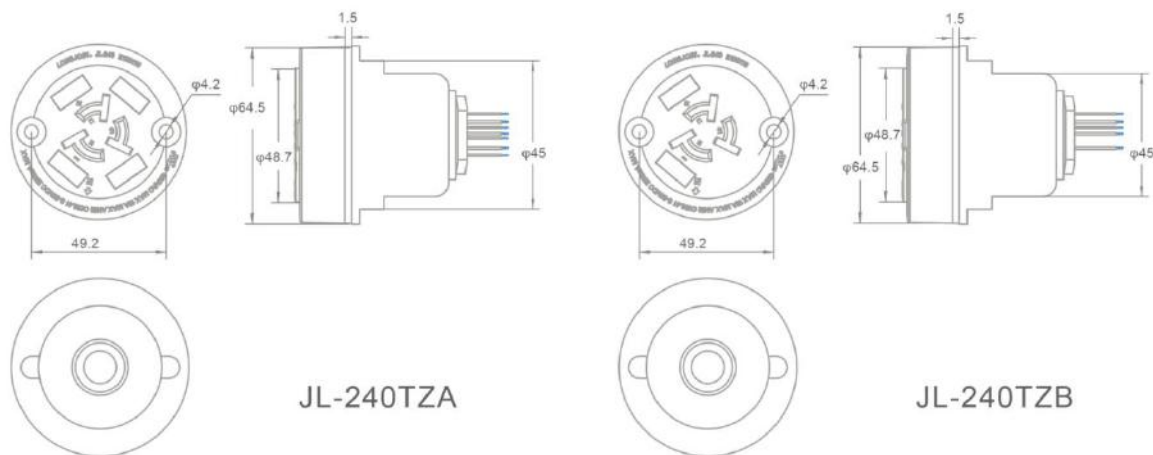
JL-240TZB



Product Summary

The JL-240TZ series photocontrol receptacles were designed for the street lightings those intended to have an ANSI C136.41 receptacle to fit a twist-lock photocontrol. This series conform newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers an outdoor wiring cable for field modification works.

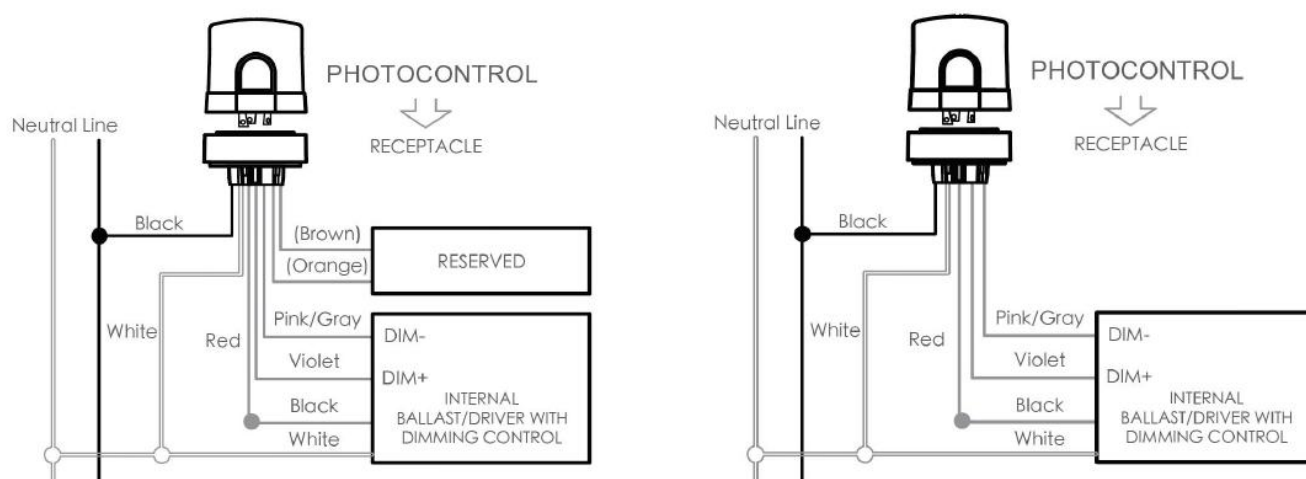


Specifications

Model No.	JL-240TZ
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Load Rating	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG/14AWG (Non-UL) 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Outdoor Wiring Cable	●
Certifications	ANSI C136.41-2013     

Ordering Information

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

JL-240TZ A 14 20 H R -7P S CWP L

	1	2	3	4	5	6	7	8	9
JL-240TZ	A	14	20	H	R	7P	S	CWP	L

1: A=4 Dimming pads

B=2 Dimming pads

2: Power Lead Rating

14=14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16=16 AWG, 105°C rated

16G=16 AWG 150 °C rated

16S=16 AWG Double isolated wire (Class II)

3: 20= 20" (Customizable, 12 Min.)

4: H=black rear Cover

null= gray rear cover

5: R=rear holder

6:7P=7 wires

5P=5 wires

7: S = wire outlets glued

8: CWP=cable with external forced connector

null=Appliance wiring wire with zinc nut and gasket

9: L=aluminum bracket

T=iron bracket

(option)

Refer to bracket assembly drawing for dimension details

JL-240SXB

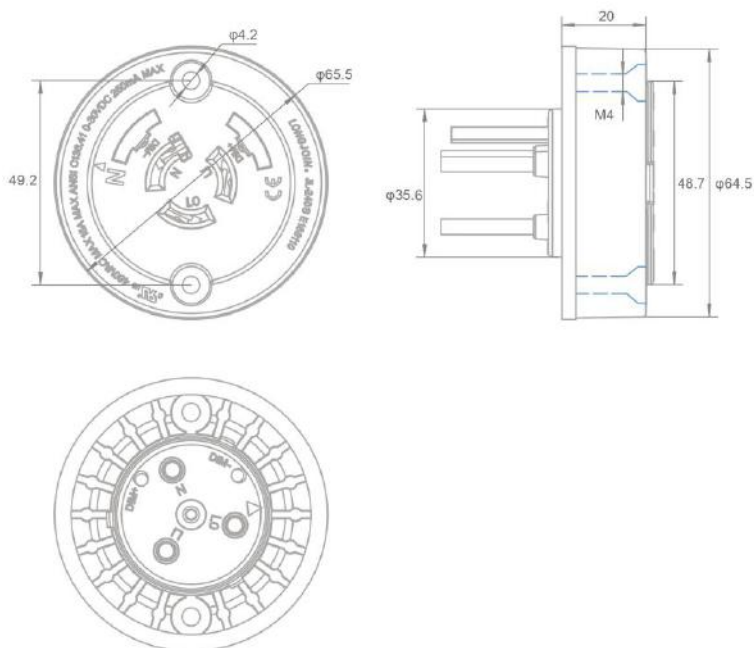
Fixed Twist-lock dimming receptacle



Product Summary

All the JL-240SXB photocontrol receptacle was designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. This product conforms newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 2 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 wiring leads at rear side for signal connection. Especially, this product does not occupy any space inside the lantern for those cases less internal space available.



Features

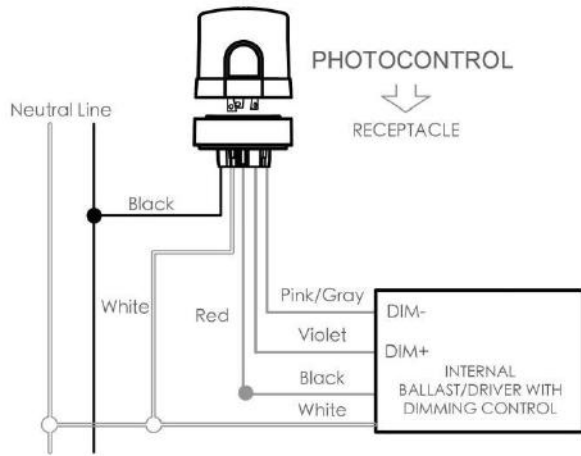
- Glass-Fiber strongen PBT
- Gilded Pads made from phosphor bronze Nickel plated and gilded over 0.7um
- Gold plating per ASTM B 488
- Silicone gasket applied to flange
- Shorter body design for slim fixtures

Specifications

Model No.	JL-240SXB
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Load Rating	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG, 14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Outdoor Wiring Cable	●
Certifications	  CB CE UK CA

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-240SX B 14 12

	1	2	3
JL-240SX	B	14	12

1: B=2 Dimming pads

2: Power Lead Rating

14= 14 AWG, 105°C rated

14G= 14 AWG 150 °C rated

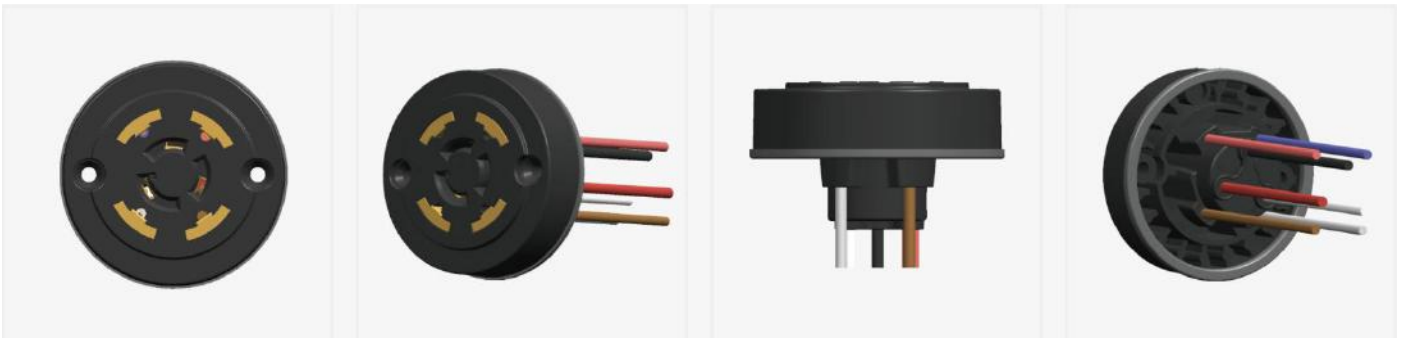
16= 16 AWG, 105°C rated

16G= 16 AWG 150 °C rated

16S= 16 AWG Double isolated wire (Class II)

3: 12= 12" (Customizable, 06 Min.)

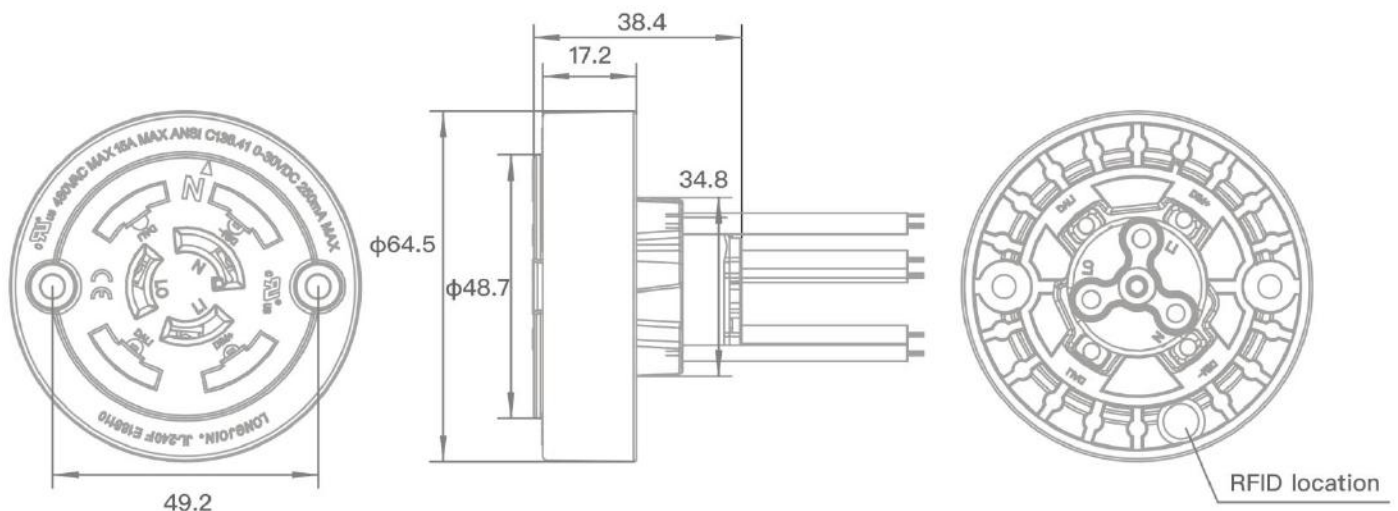
JL-240QXA Rotary lock optical controller socket (* RFID)



Product Introduction

All JL-240QXA optical controller sockets are designed for lighting fixtures, and these fixtures should use ANSI C136.10 sockets for installing rotary lock optical controllers. This series complies with the newly released ANSI C136.41 standard and allows for multiple controls of LED lights through sockets.

This series provides 4 gold-plated low-voltage solder pads on the top surface for light control, with spring contacts that comply with ANSI C136.41 standard, and 4 wiring wires located on the back for signal connection. JL-240QXA provides a screw hole O-ring, which is sealed with silicone glue both inside and outside for better waterproof function. In particular, the product provides an RFID module inside the body that allows activation of NFC applications.



Features

- The main body is made of polybutylene terephthalate
- Contact points made of phosphorus bronze

- The gold pad is made of nickel plated phosphorus bronze and plated with gold according to ASTM B 488
- Silicone gasket
- RFID specification: 13.56MHz, 1Kb

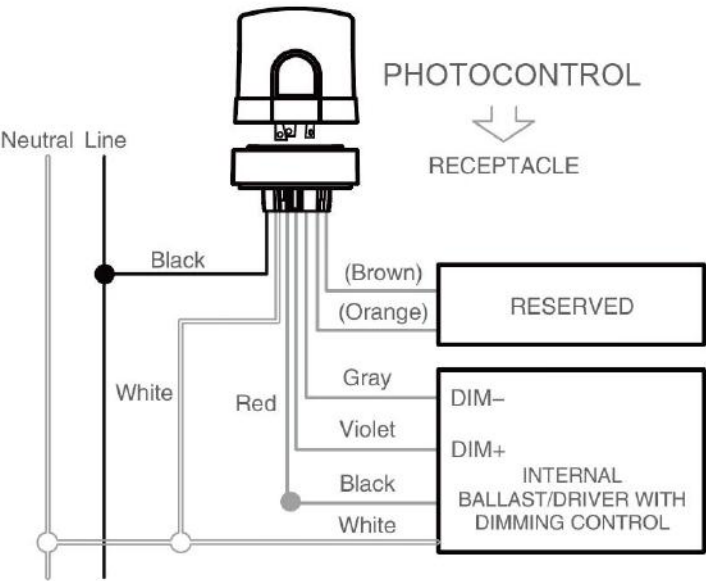
Specifications

Product number	JL-240QXA
Applicable voltage range	0~480VAC
Rated frequency	50/60Hz
Power load	15A
signal control	0-30 VDC, 250 mA Max
Wire specifications	16AWG,14AWG 6" min
working temperature	-40°C ~ +70°C
Working humidity	96%
Outdoor wiring cables	●
authentication	   

Installation

- Disconnect the power supply.
- Connect the socket according to the diagram below.
- The arrow at the top of the socket indicating the north is used to help determine the correct direction.

- Adjust the socket position by loosening the screws and secure it after repositioning.



Ordering Information

JL-240Q X A 14 12 R

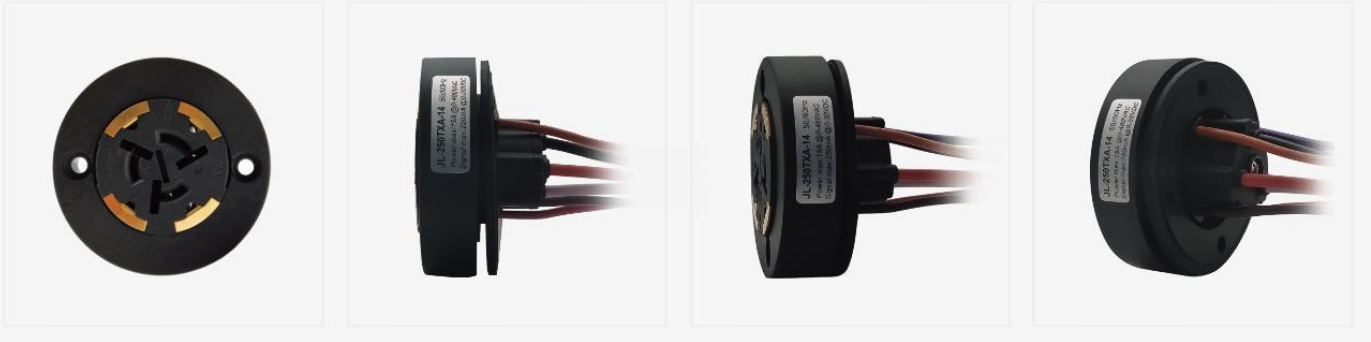
	1	2	3	4
JL-240QX	A	14	12	R

- 1: A=4 Dimming pad
- 2: Wire specifications
 - 14= 14 AWG, 105°C rated
 - 14G=14 AWG 150 °C rated
 - 16= 16 AWG, 105°C rated
 - 16G=16 AWG 150 °C rated
 - 16S= 16 AWG Double insulated wire (Class II)
- 3: 12= 12 Inches (customizable, minimum 6 inches)
- 4: R=Rear bracket

JL-250T

Photocontrol Receptacle (North-Orientation-Free)

JL-250TXA

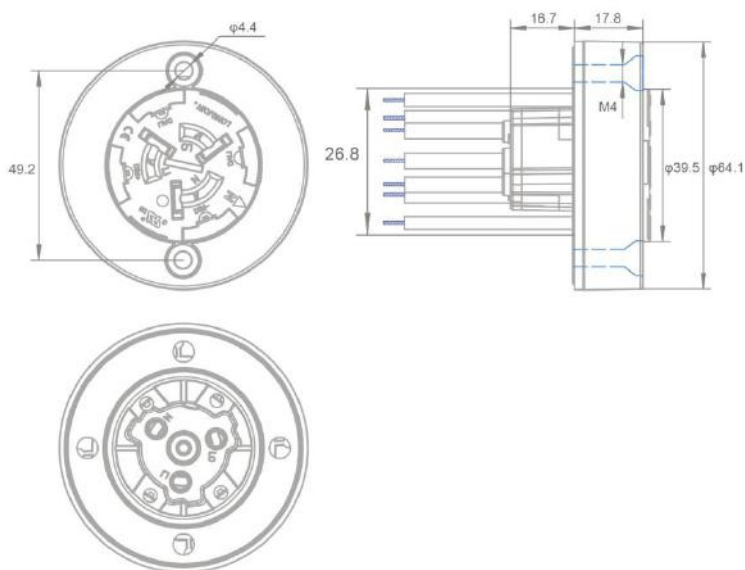


Product Summary

This photocontrol receptacles is designed for the lanterns those intended to have an ANSI C136.41 receptacle to fit a twist-lock photocontrol to allow a LED lamp multi-controlled through the receptacle.

It offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 or 4 wiring leads at rear side for signal connection.

It also offers 360° rotation limiting feature to conform ANSI C136.41 requirements.



Features

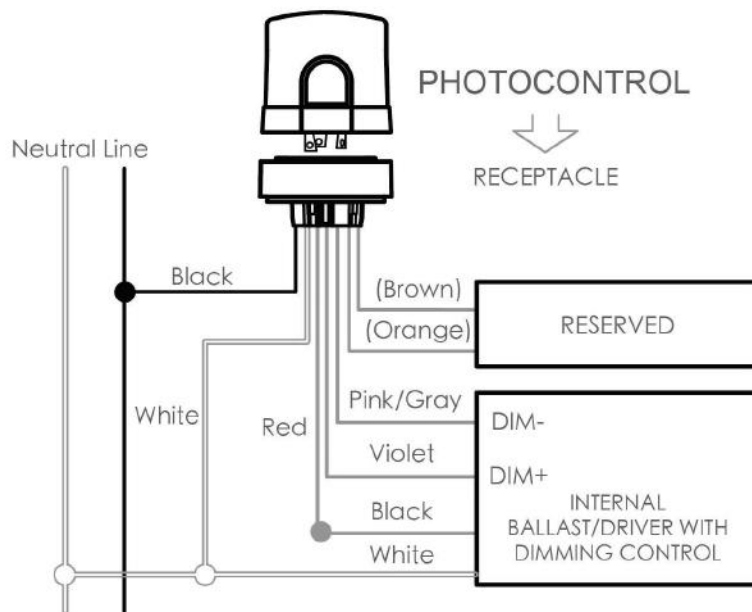
- Body made from polybutylene terephthalate
- Contacts made from phosphor bronze
- Gold pad made from Nickel plated phosphor bronze with gold plating per ASTM B 488
- Silicone gasket offered
- Rotatable by central slot adjusting with screwdriver
- The screw can be loosened to find the north, making it convenient for the installation of the light controller (default north direction during installation), avoiding the decline of the light sensitive components of the light controller and extending its service life

Specifications

Model No.	JL-250T
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Load Rating	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG/14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Certifications	ANSI C136.41-2013   CB CE UK CA

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-250TX A 14 12 R -7P C

	1	2	3	4	5	6
JL-250TX	A	14	12	R	7P	C

1: A=4 Dimming pads

B=2 Dimming pads and 2 decorative pads

2: Power Lead Rating

14=14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16=16 AWG, 105°C rated

16G=16 AWG 150 °C rated

16S=16 AWG Double isolated wire (Class II)

3: 12= 12" (Customizable, 12 Min.)

4: R=rear holder

5: 7P=7 wires

5P=5 wires

6: C=external forced connector cablet

null=electronic wire Standard nut washer

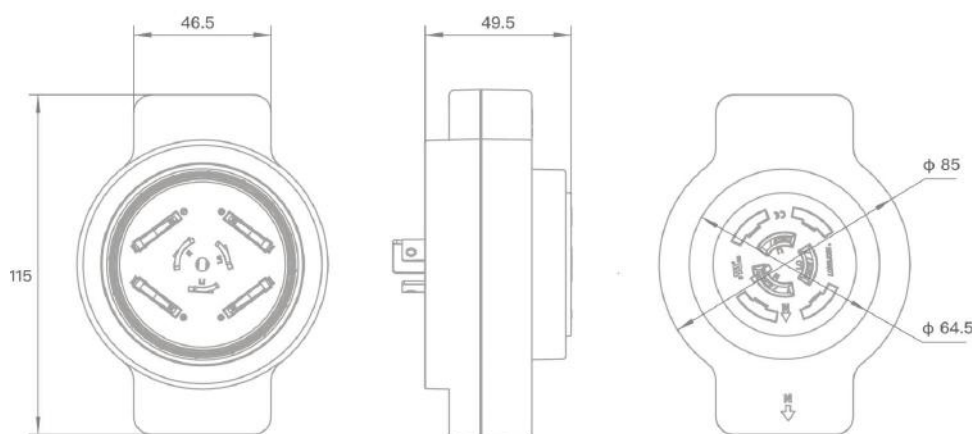
JL-250F NEMA (7P)



Summary

The JL-250F is designed for outdoor lamps and installed between the traditional NEMA socket and the light controller. It is used for rapid transformation to improve the surge protection capability of the NEMA interface lamps. The SPD inside the lamps can be replaced by JL-250F, which is more convenient for installation、maintenance and replacement, and can effectively reduce operation and maintenance costs. The product has built-in surge differential mode + surge common mode protection, which greatly improves the working ability of the light controller in the complex electromagnetic interference environment. The combination design of temperature fuse and MOV+GDT can avoid the deterioration of heating caused by aging and over-energy of MOV. The center of the bottom is equipped with a ground hole design, which can provide the grounding circuit of the lamp controller and improve the common mode suppression ability of the lamp.

Three views



Features

- Product certification: ANSI C136.41、UL 1449、UL 773、ROHS、CB、CE、UKCA

- Component certification: UL、CUL、TUV、VDE、PSE、CQC、ROHS、REACH
- 20KV/10KA, 10KV/5KA Different protection levels are available
- Differential mode + common mode protection (L-N, L-G, N-G)
- 1.2/50us & 8/20us combined wave performance tests
- Center ground hole design
- Diagnostic LED
- GDT+MOV, prevent MOV aging to form leakage current, longer life
- Built-in temperature fuse, over-temperature protection
- High strength PC material
- Gold-plated signal terminals in phosphor bronze nickel plating, gold-plated in accordance with ASTM B 488
- Copper plug
- Flat design, less wind resistance
- Human mechanical handshake design, more convenient rotation
- 347VAC and 480VAC versions available

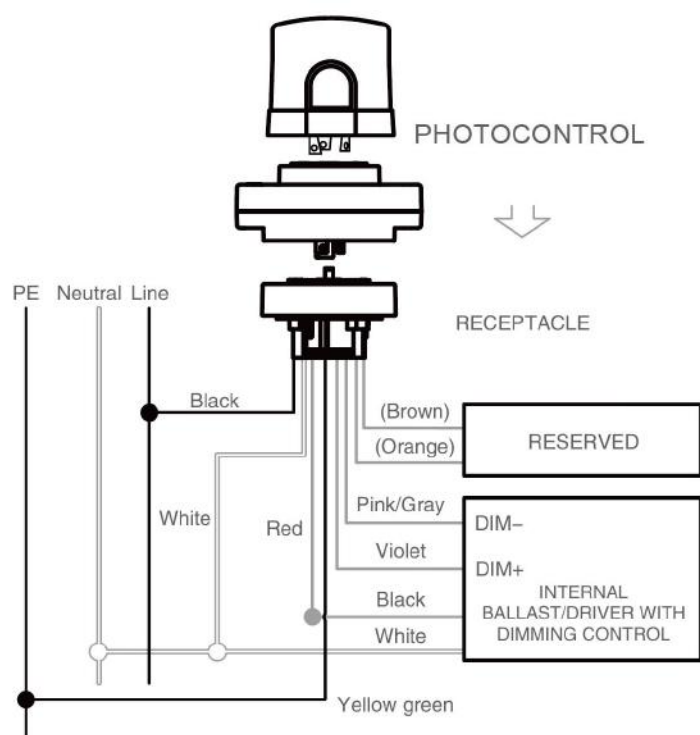
Parameters

	250F15CL	250F15C	250F15DL	250F15D	250F21CL	250F21C	250F21DL	250F21D
Rated operating voltage	120~277VAC							
Max operating voltage	320VAC							
Rated operating frequency	50/60Hz							
Rated surge voltage	10KV				20KV			
Rated surge current	5KA				10KA			
Max surge current	10KA				20KA			
Max energy	300J				405J			
Clamping voltage	1200V	1150V	1200V	1150V	1150V	1100V	1150V	1100V
L-N surge protection	√							
L-G, N-G surge protection	√	√			√	√		
Ground hole	√	√			√	√		
Leakage current suppression (GDT)	√		√		√		√	
Over-temperature protection	√							
Diagnostic LED	√							
AC line rated load	15A							

Control line rated load	0-30 VDC, 1500mA							
Operating temperature	-40℃ ~ +70℃							
Operating humidity	HR96%							
Lifetime	long-life	Normal	long-life	Normal	long-life	Normal	long-life	Normal
Certification	ANSI C136.41-2013、UL 1449、UL 773 							

Installation

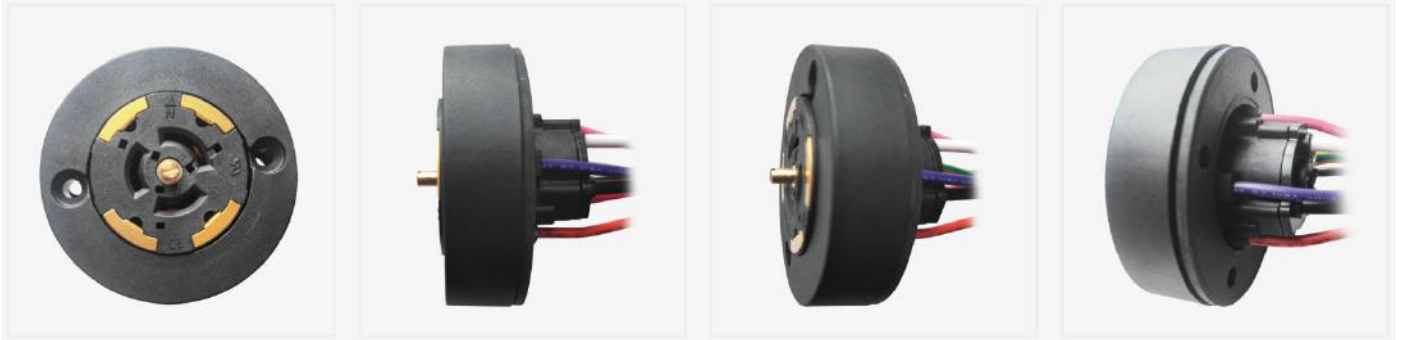
- Connect the bottom socket cable
- Insert 250F and turn clockwise to tighten
- Insert the light controller and turn clockwise to tighten



Note: If the lamp controller has the need of common mode surge protection, the bottom cable socket needs to use our JL-250G model, its center position has a grounding column design, can be matched with JL-250F. The wire in the center of the back of the JL-250G is the ground wire and needs to be connected to the ground column inside the lamp.

JL-250G

Twist-lock Dimming receptacle (8P rotatable)

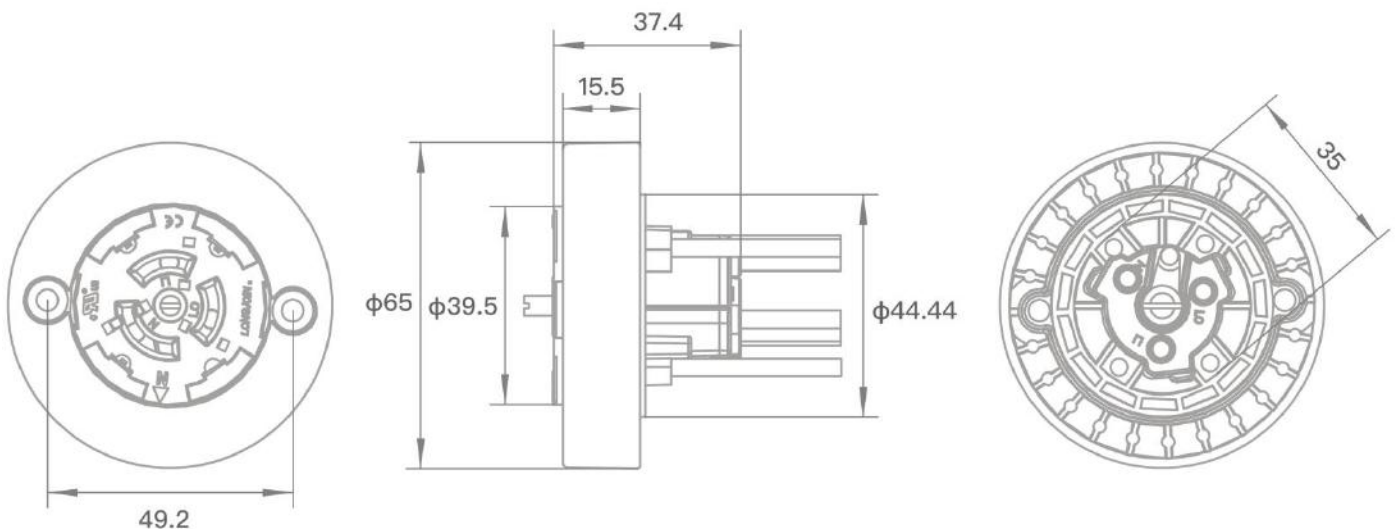


Product Summary

All the JL-250GXA series photocontrol receptacles were designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. This series conform newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

This series offers 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 4 wiring leads at rear side for signal connection.

In particular, the grounding terminal in the center of the socket works with the JL-250F**C* series to achieve common mode surge protection.



Features

- Body made from polybutylene terephthalate

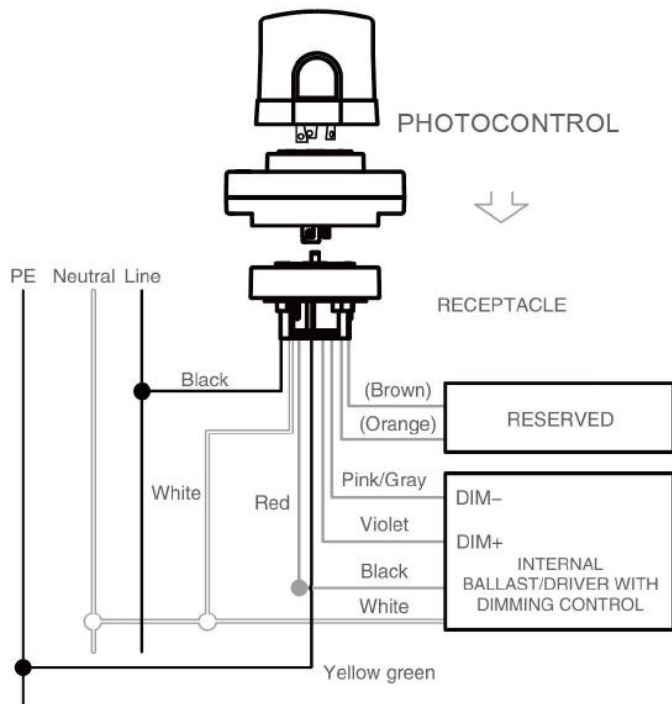
- Contacts made from phosphor bronze
- Gold pad made from Nickel plated phosphor bronze with gold plating per ASTM B 488
- Silicone gasket offered
- center ground terminal, with JL-250F**C* series to achieve common mode surge protection.
- Loosen the screws to find the north, easy to install the optical controller (installation of the default pointing to the north), to avoid the decline of the optical controller photosensitive components to extend the service life

Specifications

Model No.	JL-250G
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Power Loading	15A
Signal Control	0-30 VDC, 1500 mA Max
Lead	16AWG/14AWG 6" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Certifications	ANSI C136.41-2013     

Installation

Disconnect power; wire the receptacle according to the diagram below.



An arrow indicating NORTH on the top face is used to assist correct orientation.

Ordering Information

JL-250GX A 14 12 R -8P C

	1	2	3	4	5	6
JL-250GX	A	14	12	R	8P	C

1: A=4 Dimming pads

B=2 Dimming pads and 2 decorative pads

2: Power Lead Rating

14=14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16=16 AWG, 105°C rated

16G=16 AWG 150 °C rated

16S=16 AWG Double isolated wire (Class II)

3: 12= 12" (Customizable, 12 Min.)

4: R=rear holder

5: 8P=8wires

6: C= Cables with flared waterproof connectors

Null = Wire with zinc nut and washer

JL-260C

External mounting Dimming Receptacle

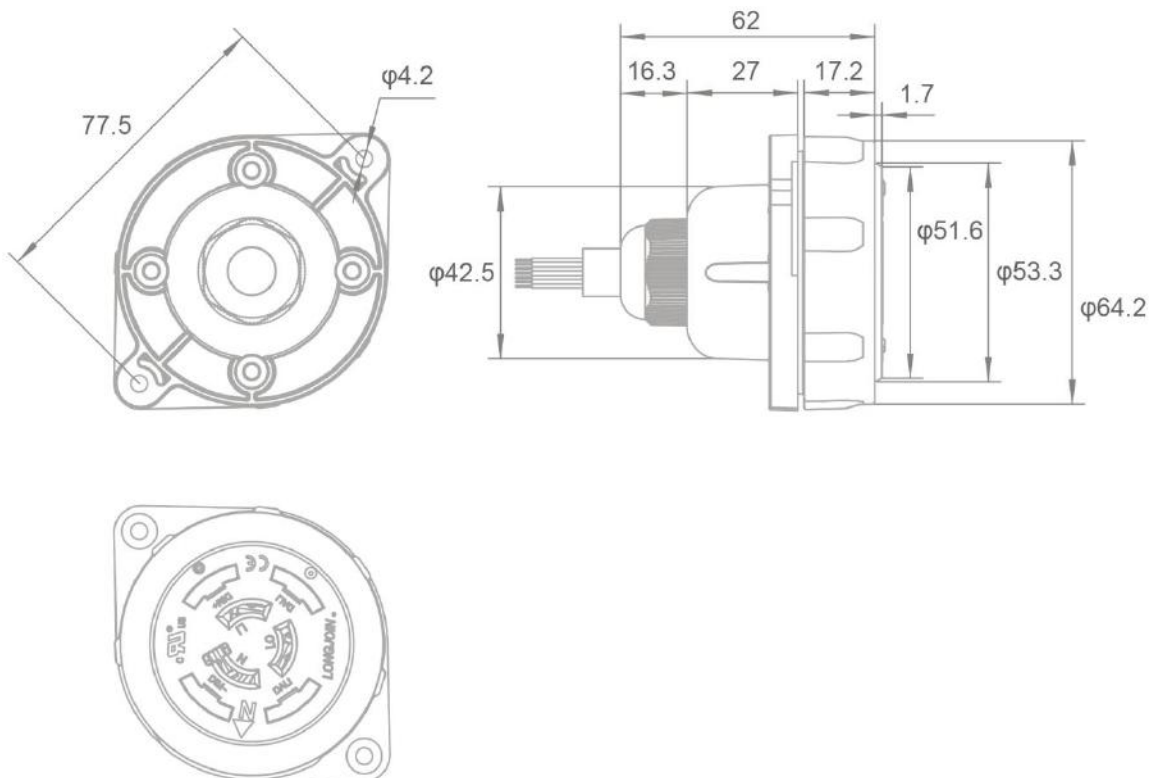


Product Summary

The JL-260C photocontrol receptacle is designed for the street lightings those intended to have an ANSI C136.41 receptacle to fit a twist-lock photocontrol. It conforms newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

It offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers an outdoor wiring cable for field modification works.

Especially, it is featured with waterproof self-rotation and 360° limited.



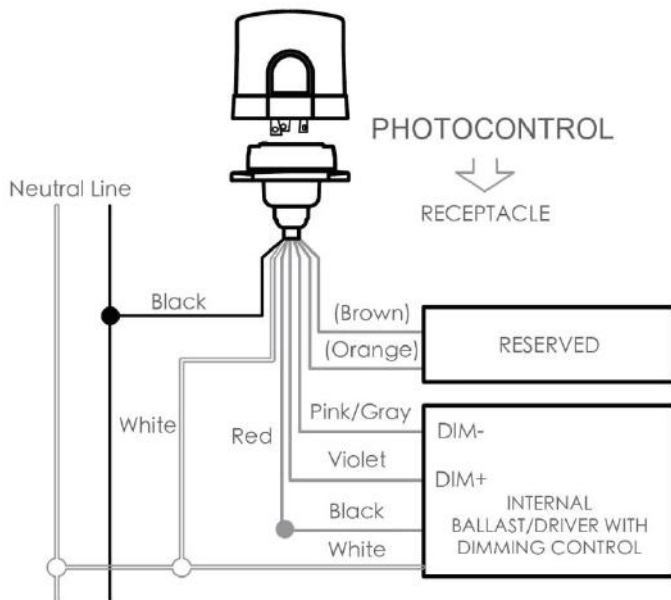
Features

- Body made from polycarbonate
- Contacts made from phosphor bronze
- Gold pad made from Nickel plated phosphor bronze with gold plating per ASTM B 488
- High light North pointer
- Lamp stand arm bonding kit enclosed

Specifications

Model No.	JL-260C
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Power Loading	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG(Power)+18AWG(Signal) 20" min
Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Certifications	ANSI C136.41-2013   CB CE UK CA

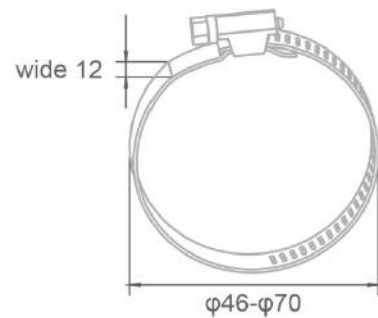
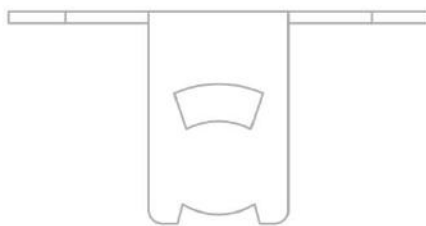
Installation



Assemblies



Mounting rack



Hoop hoop

Ordering Information

JL-260C 20 -7P L

	1	2	3
JL-260C	20	7P	L

1: 20=20" (Customizable, 20 Min.)

2: 7P=7 wires

5P=5 wires

3: L=special aluminum bracket
(option)

JL-260D

Flagship Slim Dimming Receptacle



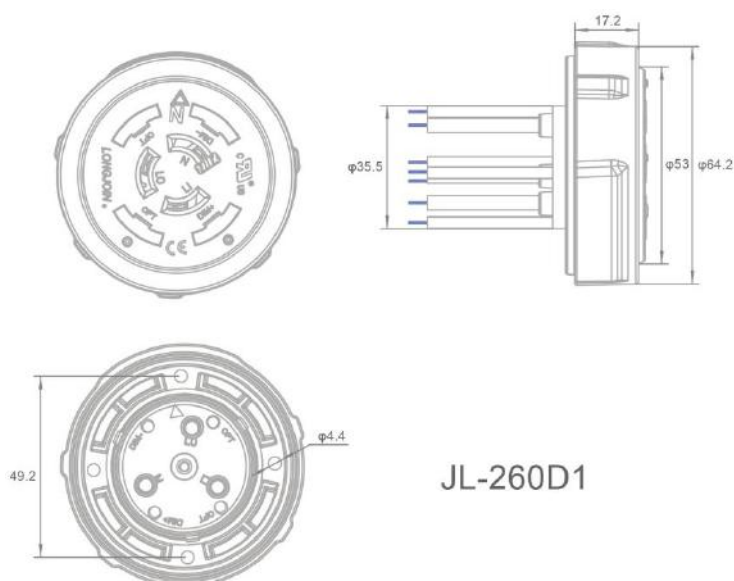
Product Summary

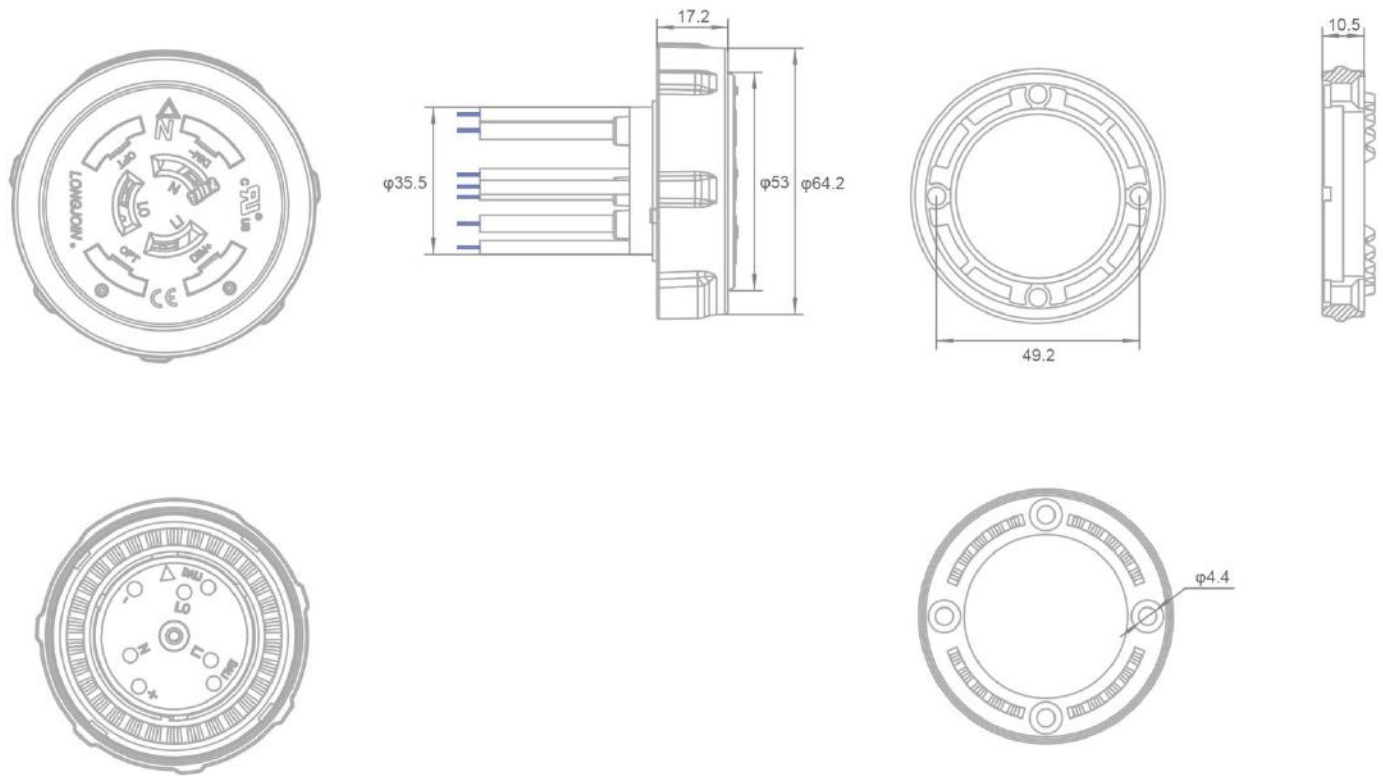
This JL-260D series photocontrol receptacle is designed for the lanterns those intended to have an ANSI C136.10 receptacle to fit a twist-lock photocontrol. it conforms newly published ANSI C136.41 to allow a LED lamp multi-controlled through the receptacle.

It offers 2 or 4 gold-plated low voltage pads on the top surface to fit photocontrol has ANSI C136.41 conforming spring contacts, and offers 2 or 4 wiring leads at rear side for signal connection.

Especially, it is featured with waterproof self-rotation and 360° limited, while a super compressed height size is offered.

D1 type is an integral structure, with external thread installation. Type D2 is a split structure for internal thread installation.





JL-260D2

Features

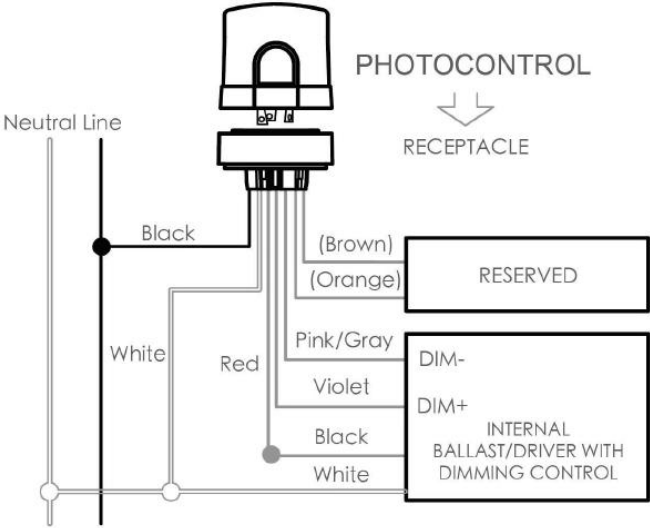
- Body made from polycarbonate
- Contacts made from phosphor bronze
- Gold pad made from Nickel plated phosphor bronze with gold plating per ASTM B 488
- High light North pointer

Specifications

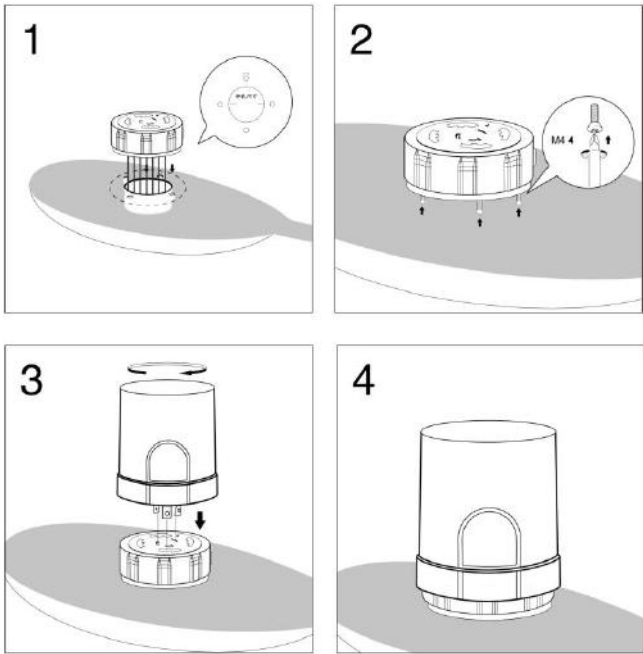
Model No.	JL-260D
Applicable Volt Range	0~480VAC
Rated Frequency	50/60Hz
Power Loading	15A
Signal Control	0-30 VDC, 250 mA Max
Lead	16AWG/14AWG 6" min

Ambient Temperature	-40°C ~ +70°C
Related Humidity	96%
Certifications	ANSI C136.41-2013     

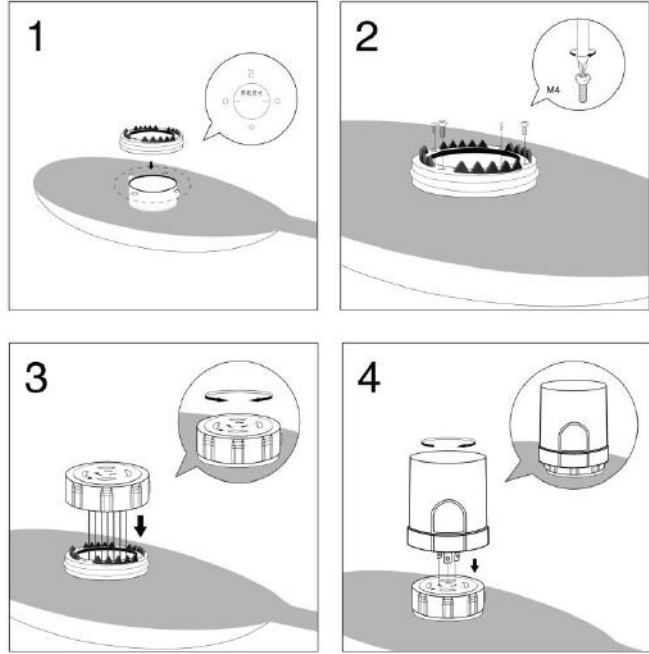
Installation



JL-260D1



JL-260D2



Ordering Information

JL-260D 1 16 12 -7P

	1	2	3	4
JL-260D	1	16	12	7P

1: 1=ex-work in one-piece, for outward screwing assembling

2=ex-work in divided condition, for inward screwing assembling

2: Power Lead Rating

16=16 AWG, 105°C rated

14=14 AWG, 105°C rated

14G=14 AWG 150 °C rated

16G=16 AWG 150 °C rated

3: 12= 12" (Customizable, 06 Min.)

4: 7P=7 wires, gold pads x4

5P=5 wires, gold pads x2 and decorative pads x2

JL-7: Connect to the IoT and AI

Langjun intelligent is a member of zhaga alliance. The jl-7 series socket and base products produced and developed meet the requirements of Zhaga Book-18 standard interface (z-lex-r, z-lex-c) and have passed relevant certification.

Different from jl-700, this product is a leadless version and supports the hot plug function of wires. This product is convenient for development and is suitable for indoor and outdoor lighting scenes such as roads, parks, shopping malls, offices, factories, parking garages, and homes. It is applicable to the integrated installation of various lamps, such as street lamps, industrial and mining lamps, corridor lamps, wall lamps, etc.

JL-7 series Zhaga Book-18 lock controller (customizable)



Product Summary

Langjun intelligence is a member of the zhaga alliance. The zhaga series locking controllers produced and developed by Langjun intelligence meet the zhaga book18 standard (z-lex-r, z-lex-c). This series of controllers are suitable for indoor and outdoor lighting scenes such as roads, parks, shopping malls, offices, factories, parking garages, and homes.

Features

- ZHAGA BOOK18 interface standard
- Small size, suitable for installation in most lamps

- low power consumption
- anti false triggering design of interference light source
- compensation design for reflected light of lamps
- combined installation, waterproof grade up to IP66

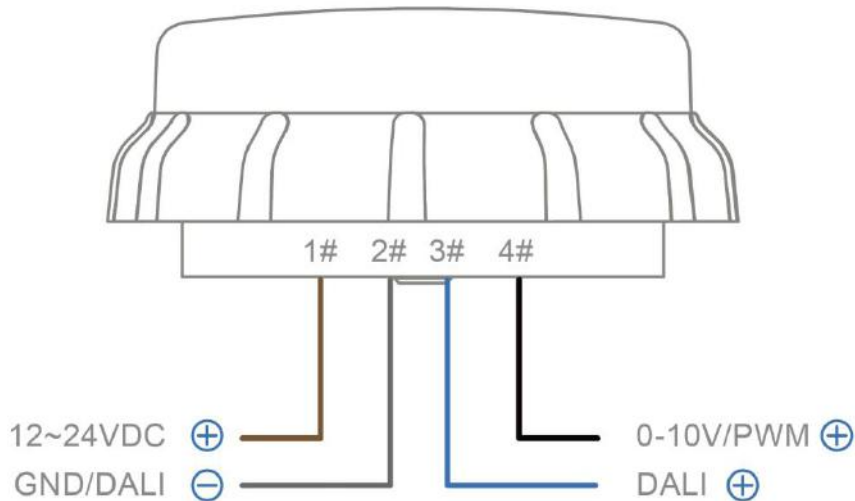
Specifications

Model No.	JL-701A	JL-7X1A	JL-7X2A	JL-711N
Applicable Volt Range	12-24VDC			
Power supply current requirements	< 3mA	< 15mA	< 50mA	< 200mA
Daytime static power consumption	< 0.04W	< 0.1W		< 0.2W
Photosensitive wavelength	350~1100nm , Peak wavelength 550nm			
Switching lamp threshold	Turn on: 16 Lux Turn off: 64 Lux	Turn on: 50 Lux Turn off: Dynamic generation		Turn on: 100 Lux Turn off:Dynamic generation
Reflected light compensation	None	Upper limit of compensation 6000 Lux		
Photosensitive action delay (this time needs to be met continuously)	Turn on: 5S Turn off: 15S	Turn on: 5S Turn off: 20S	Turn on: 5S Turn off: 60S	Turn on: 5S Turn off: 20S
Power on initialization self-test	100% light up 5 seconds before power on			
Ambient Temp	-40 °C ~ +70 °C			-
Related Humidity	96%			-
Certifications				-

Notes:

1. ZHAGA requires DC power supply, which may increase driver cost.
2. Driver is powered all day, so the energy consumption will increase a little.
3. Partial 0~10V drivers may not match, which may cause the fixture to not turn off completely.

Installation



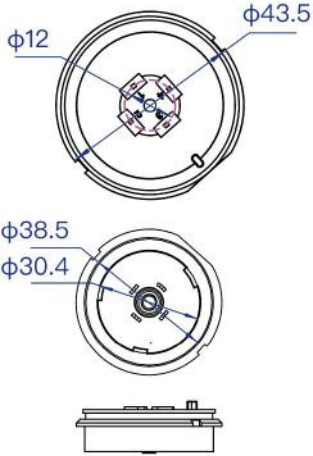
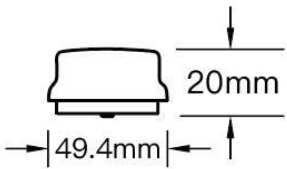
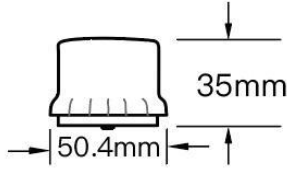
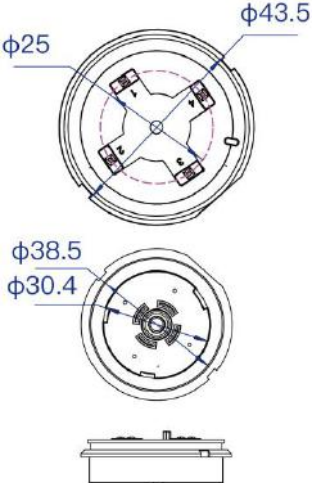
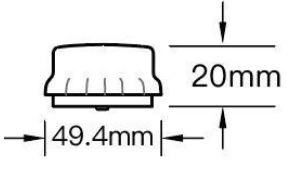
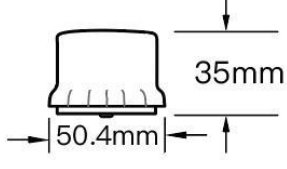
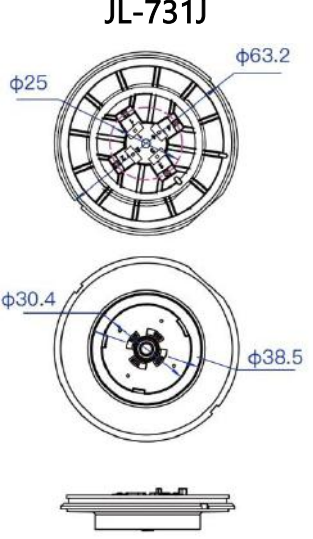
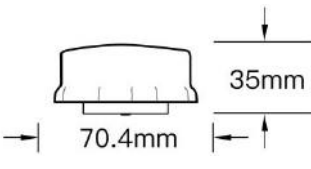
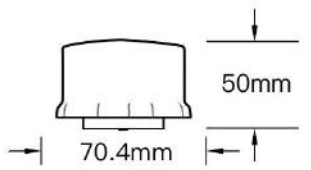
Model

Model / Function	Dimming	Sensing Type	Midnight	Communication	Diameter* Height (mm)	Remarks
JL-701A	0/10V	light-sensitive	/	/	49.4*20	
JL-711A1	0~10V	light-sensitive	/	/	49.4*20	
JL-711A2	0~10V	light-sensitive	Factory preset	/	49.4*20	
*JL-711B	0~10V	light-sensitive	customize	BLE	50.4*35	
JL-711N	0~10V	light-sensitive	customize	NB-IoT	70.4*35	
*JL-711G	0~10V	light-sensitive	customize	ZIGBEE+LTE	80.7*35	
JL-719WB	0~10V	/	Time and brightness can be set	WIFI (802.11/g/b) +BLE (5.1)	50.4*35	
JL-721A1	DALI2.0	light-sensitive	/	/	49.4*20	
JL-721A2	DALI2.0	light-sensitive	Factory	/	49.4*20	

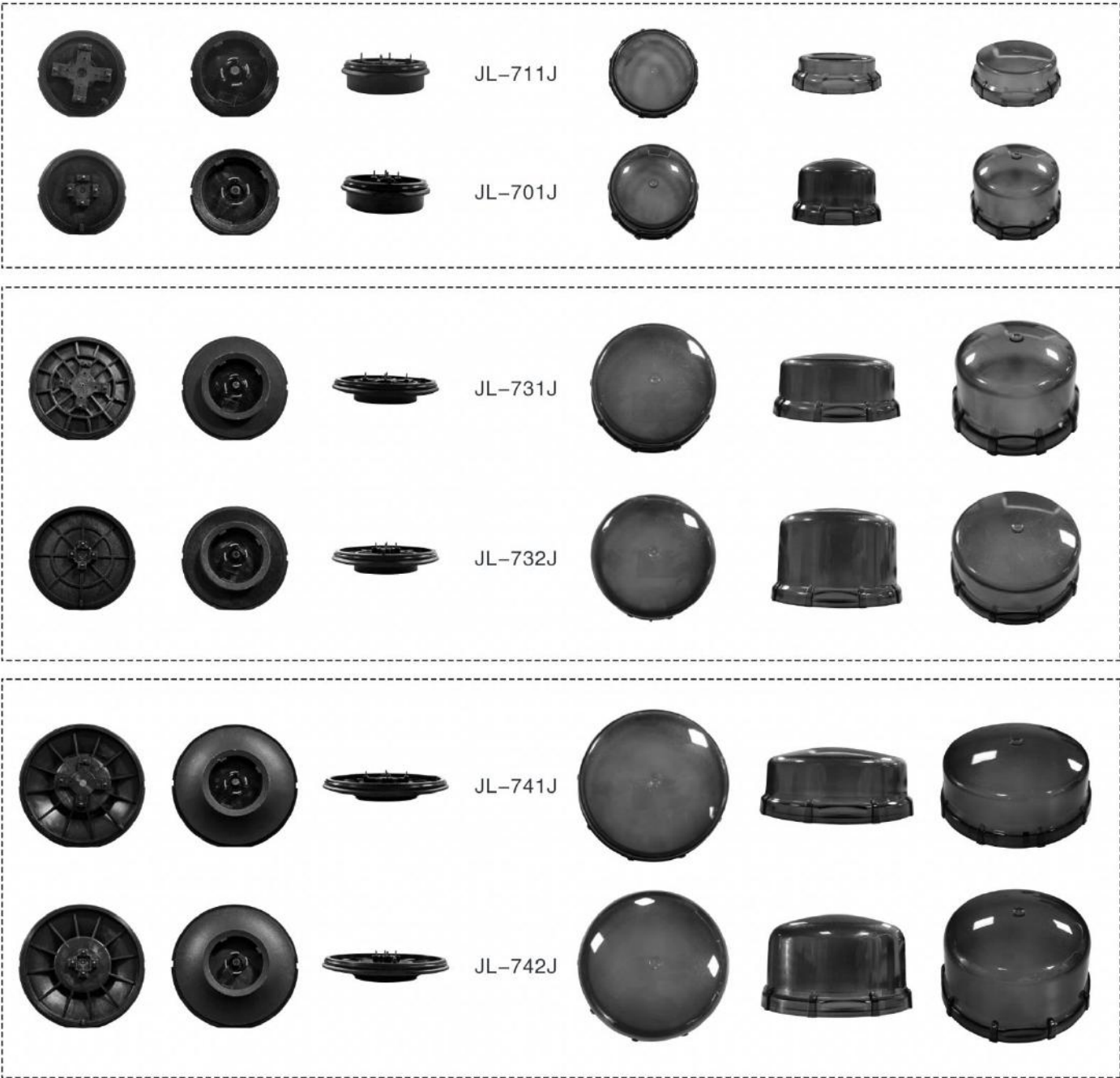
			preset			
*JL-721B	DALI2.0	light-sensitive	customize	BLE	50.4*35	
*JL-721G	DALI2.0	light-sensitive	customize	ZIGBEE+L TE	80.7*35	
JL-721NP	DALI2.0	light-sensitive	customize	NB-IoT	70.4*35	
JL-731A1	PWM	light-sensitive	/	/	49.4*20	
JL-731A2	PWM	light-sensitive	Factory preset	/	49.4*20	
*JL-731B	PWM	light-sensitive	customize	BLE	50.4*35	
*JL-731G	PWM	light-sensitive	customize	LTE	80.7*35	
JL-712A3	0~10V	light-sensitiv e+microwave	/	/	50.4*35	Application environment: indoor + outdoor Microwave frequency: 5.8GHz Microwave hanging height: < 15m Induction radius: 6~10 meters Tail patch L: support microwave linkage
JL-722A3	DALI2.0	light-sensitiv e+microwave	/	/	50.4*35	
JL-732A3	PWM	light-sensitiv e+microwave	/	/	50.4*35	
JL-712G3L	0~10V	light-sensitiv e+microwave	customize	LTE+Sub- G	70.4*50	
*JL-722G3L	DALI2.0	light-sensitiv e+microwave	customize	LTE+Sub- G	70.4*50	
*JL-732G3L	PWM	light-sensitiv e+microwave	customize	LTE+Sub- G	50.4*35	
JL-712B2	0~10V	light-sensitiv e+microwave	customize	/	50.4*35	Application environment: Indoor Microwave frequency: 5.8GHz Microwave hanging height: < 15m Induction radius: 6~10 meters
JL-732B2	PWM	light-sensitiv e+microwave	customize	/	50.4*35	

Note: products marked with "*" are products under development

Z-LEX-BP and supporting shell components

JL-701J		-2		Color-code
		-3		Color-code
JL-711J		-2		Color-code
		-3		Color-code
JL-731J JL-732J		-3		Color-code
		-5		Color-code

JL-741J JL-742J	JL-741J 	-3		Color-code
	JL-742J 	-5		Color-code



Socket selection recommendation

Model	Characteristic	Product map
JL-700	Conventional type	

JL-700X	Conventional 700 (without protective cover)	A black, cylindrical LED driver with a threaded base and two wires extending from the bottom.
JL-700-K4/K5	Conventional 700 + retainer plate and washer	A black, cylindrical LED driver with a threaded base, mounted on a silver-colored metal plate with a washer.
JL-700W	Leadless version	Two black, cylindrical LED drivers with threaded bases, shown from different angles.
JL-700S	Short thread	A black, cylindrical LED driver with a threaded base and two wires extending from the bottom.
JL-700T	Spring needle plate	A black, cylindrical LED driver with a threaded base, mounted on a silver-colored metal plate.
JL-710	Power version	A black, cylindrical LED driver with a threaded base, mounted on a silver-colored metal plate.

*Jl-710 is applicable to zhaga controller (0-10V dimming mode)

*Jl-700m / jl-770l / jl-770w (applicable to Z10 controller)

Ordering Information

JL712G3L

	1	2	3	4	5
JL-7	1	2	G	3	L

1: Dimming mode

0=0/10V; 1=0-10V; 2=DALI; 3=PWM

2: Sensing type

1=Light perception

2=Light perception+microwave

3: 通信方式

A=nothing; B=BLE; W=WIFI

Z=ZigBee; N=NB-IoT; G=LTE

4: 1=No midnight dimming (for JL-7X1 only)

2=Midnight dimming featured (for JL-7X1 only)

3=Outdoor, 5.8GHz, 15m high (for JL-7X2 only)

5: L=Microwave linkage

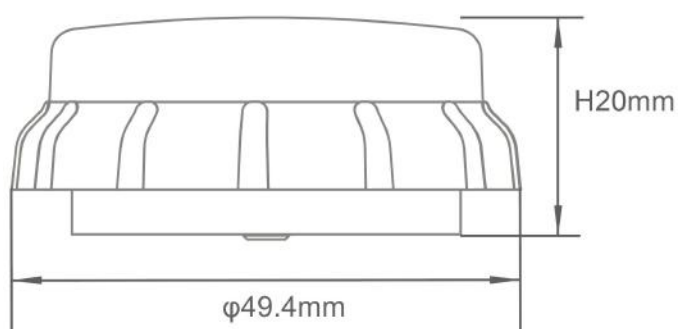
JL-701A Zhaga Book-18 Zhaga Controller



Product Summary

JL-701A is an ultra-low-cost electronic rotary lock light controller developed based on the ZHAGA BOOK18 interface standard. It can output 0V or 10V dimming signal through self-photosensitive. The light controller is suitable for lighting scenes such as roads, lawns, courtyards, and parks.

Product size chart



Features

- ZHAGA BOOK18 interface standard
- ultra low cost
- compact size, suitable for installation to various lamps
- 1.5mA ultra low working current
- anti false triggering design of interference light source
- no load power consumption $\leq 0.12W$
- environmental illumination ratio of switch action: 1:4
- power on: full on by default, 5S self-test
- protection grade: up to IP66

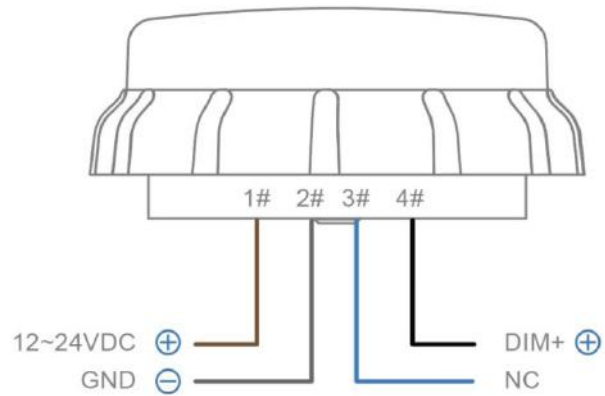
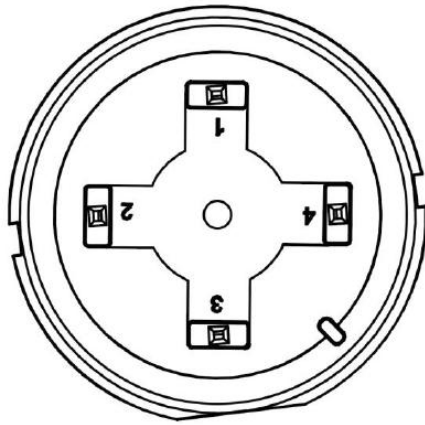
Parameters

Model	JL-701A
Power Supply	Rated voltage: 12~24VDC Rated current: 3mA
Power Consumption	Day: 12~24V/1.5mA Night: 12~24V/1.2mA
Dimming	0/10V
Dimming interface	0V or suspended (OD gate output)
Spectral Acquisition Range	350~1100nm, Peak wavelength 550nm
Turn on Illuminance	16Lux (± 10)

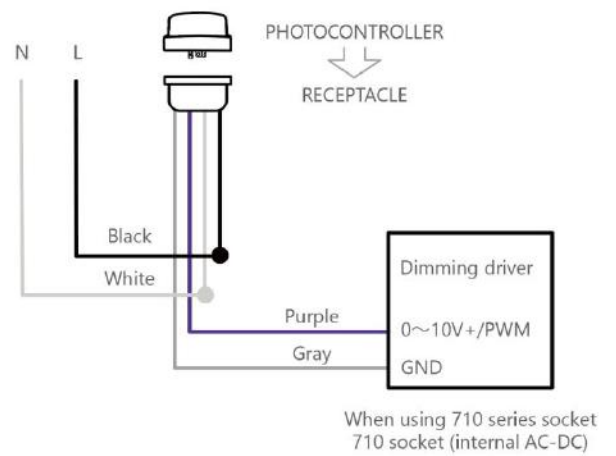
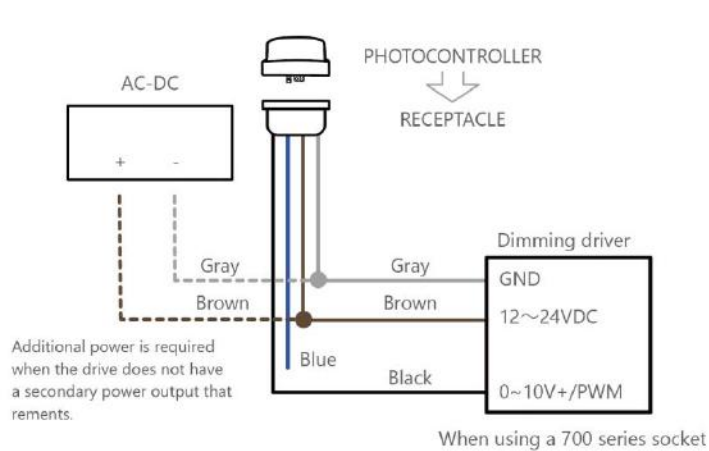
Turn off Illuminance	64Lux (±10)
Turn on delay	5S
Turn off delay	15S
Electrostatic Immunity	Standard: IEC61000-4-2 Contact Discharge: ±8kV, CLASS A Air Discharge: ±15kV, CLASS A
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Life	≥ 8000 h
Certifications	 

PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DALI-	Power Input
3	DALI+	Signal Output
4	NC	NC

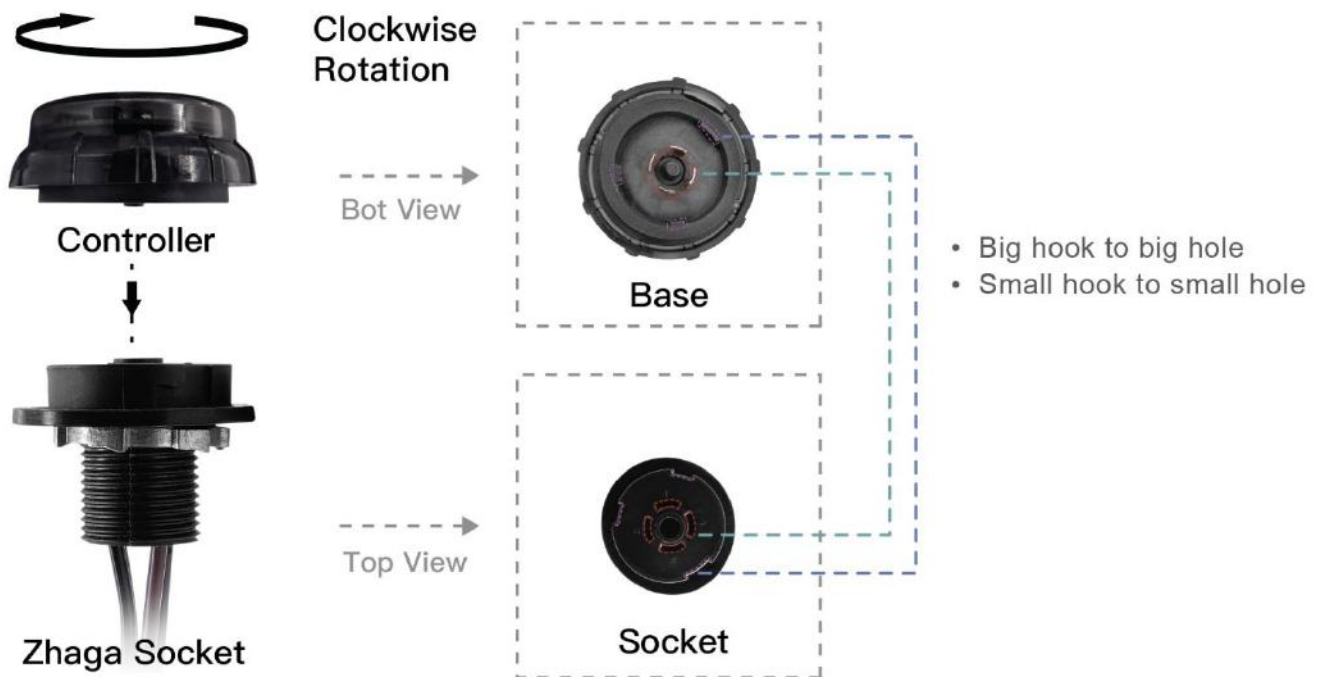


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.

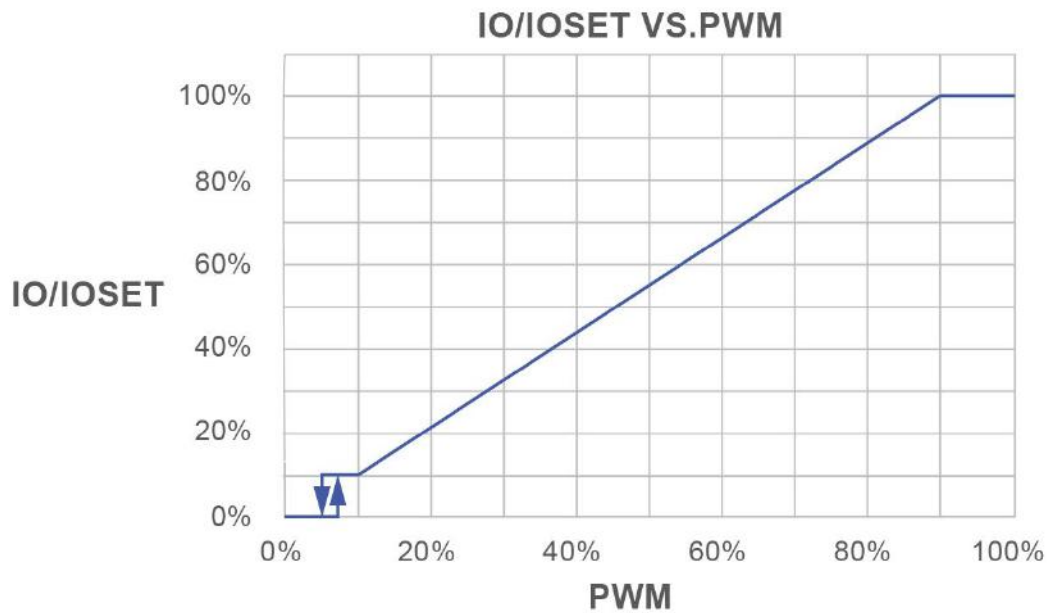


Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

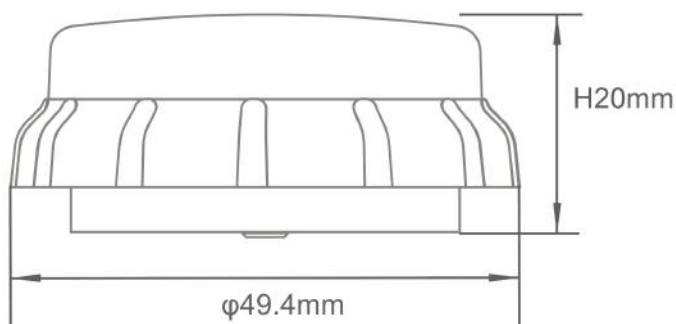
JL-711A Zhaga Book-18 Zhaga Controller



Product Summary

JL-711A series light controller products are intelligent rotary lock light controllers developed based on ZHAGA BOOK18 interface standard, which can output 0~10V dimming signals. All models have built-in photosensitive sensors. The light controller is suitable for lighting scenes such as roads, lawns, courtyards, and parks.

Product size chart



Features

- DC power supply, low power consumption
- ZHAGA BOOK18 interface standard
- Small size, suitable for installation in most lamps

- 0~10V dimming interface
- Interference lighting filtering
- Lamp reflected light compensation
- IP66

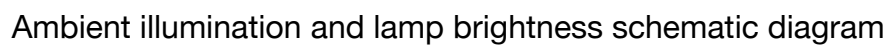
Parameters

Model	JL-711A1	JL-711A2
Power Supply	Rated voltage: 12~24VDC Rated current: 10mA	
Power Consumption	12V/5mA; 24V/6mA	
Sensor Type	Photosensitive tube	
Spectral Acquisition Range	350~1100nm, Peak wavelength 550nm	
Dimming interface	Type: 0~10V Accuracy: $\pm 2\%$ Drive current: 20mA (Typical)	
Turn on Illuminance	50Lux (± 10)	
Turn off Illuminance	Reflected light + 40Lux (± 10) after each turn on Lower limit: 50+40Lux (± 10) Upper limit: 6000Lux (± 100)	
Reflected light compensation upper limit	6000Lux (± 100)	
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode *1	
Turn on delay	5s	

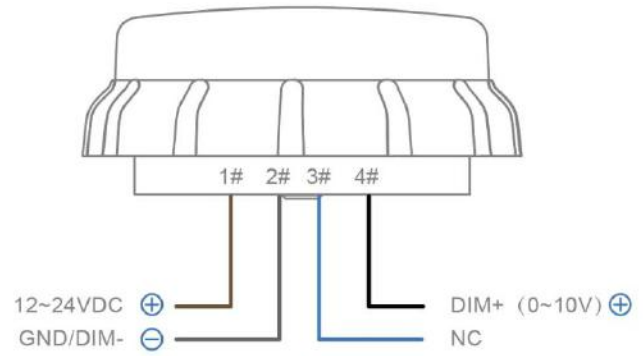
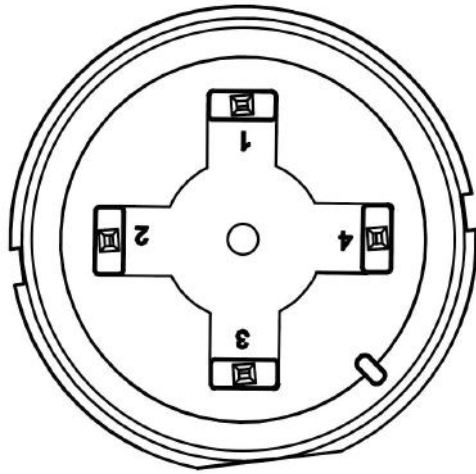
Turn off delay	20s	
0%~100%; 100%~0% Brightness change time	8s	
Midnight Dimming	NC	Trigger: the average center point of the first ten days (The first day default call night base is 10 hours) Dimming Ratio:50% Duration Ratio:40% Less than 10 days is calculated based on the actual number of days
Energy saving strategy	NC	Factory Preset
Mechanical Vibration	IEC60068-2-6	
Flammability Level	UL94-V0	
Operating Temperature	-40℃~70℃	
Storage Temperature	-40℃~85℃	
Operating Humidity	5%RH~99%RH	
IP Level	IP66	
Certifications	 	

Note:

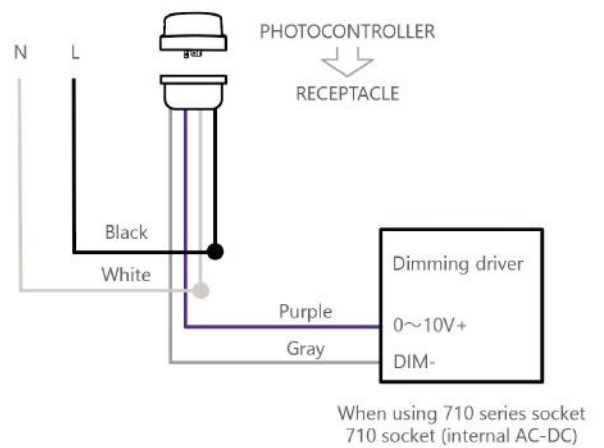
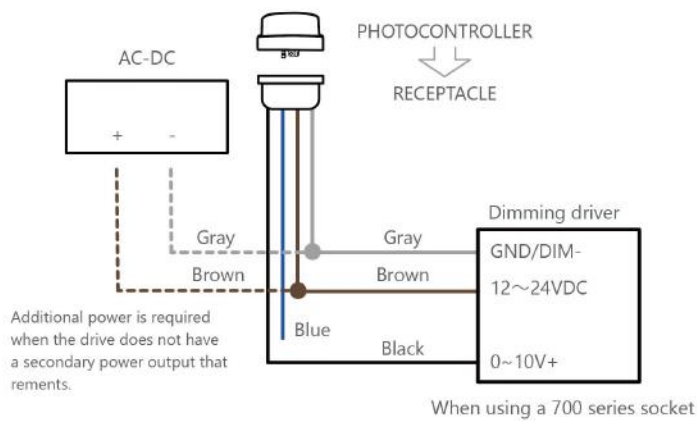
*1: Some of the old versions of the sample program turn off the light by default and maintain 5S after power-on, and then enter the self-sensing operation mode.



PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	NC	NC
4	DIM+ (0~10V+)	Signal Output

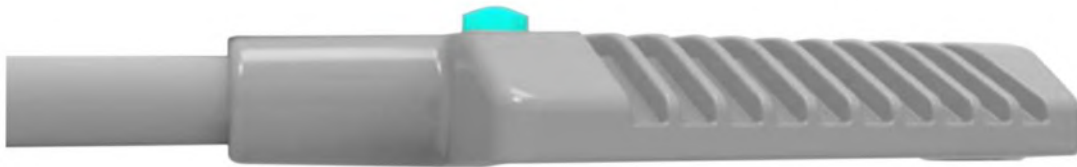
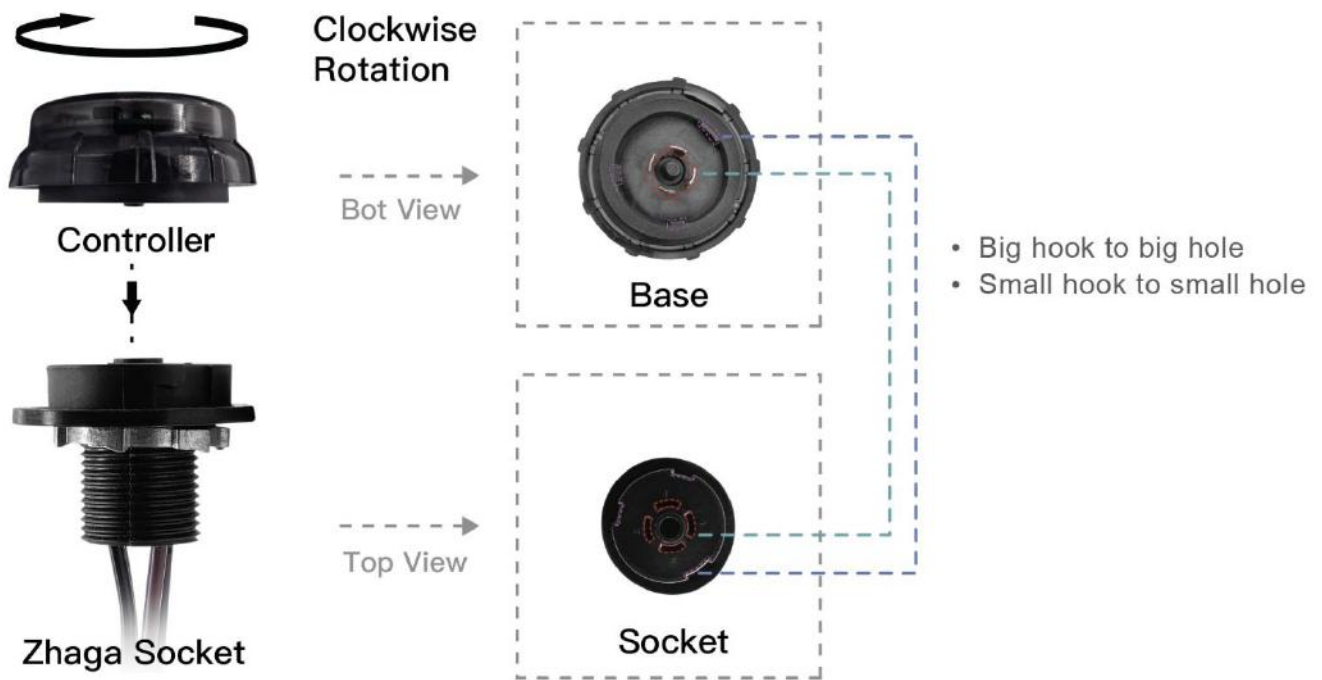


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Top installation diagram



Bottom installation diagram

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using

the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

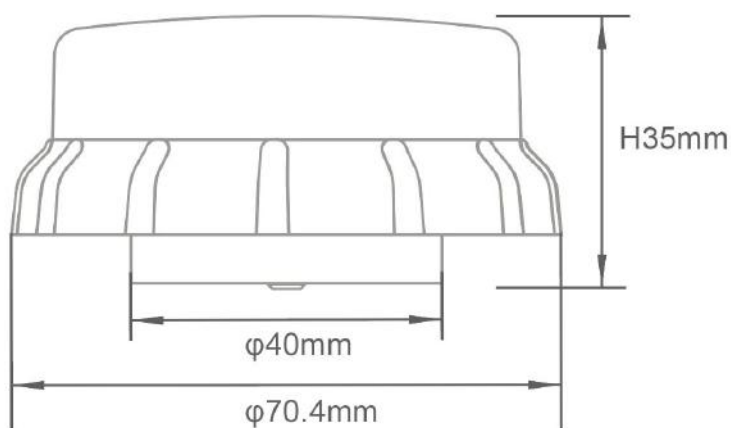
JL-711N Zhaga Book-18 Intelligent locking controller



Product Summary

The JL-711N is an intelligent lock-on controller developed based on the Zhaga Book18 interface size standard. It can be automatically dimmable through local ambient illumination, or remotely real-time/strategic dimmable through NB-IoT. The dimmable mode supports 0~10V. The controller is an intelligent type product, which is suitable for lighting scenes such as roads, mines, lawns, courtyards, parks and parking lots.

Product size chart



Parameters

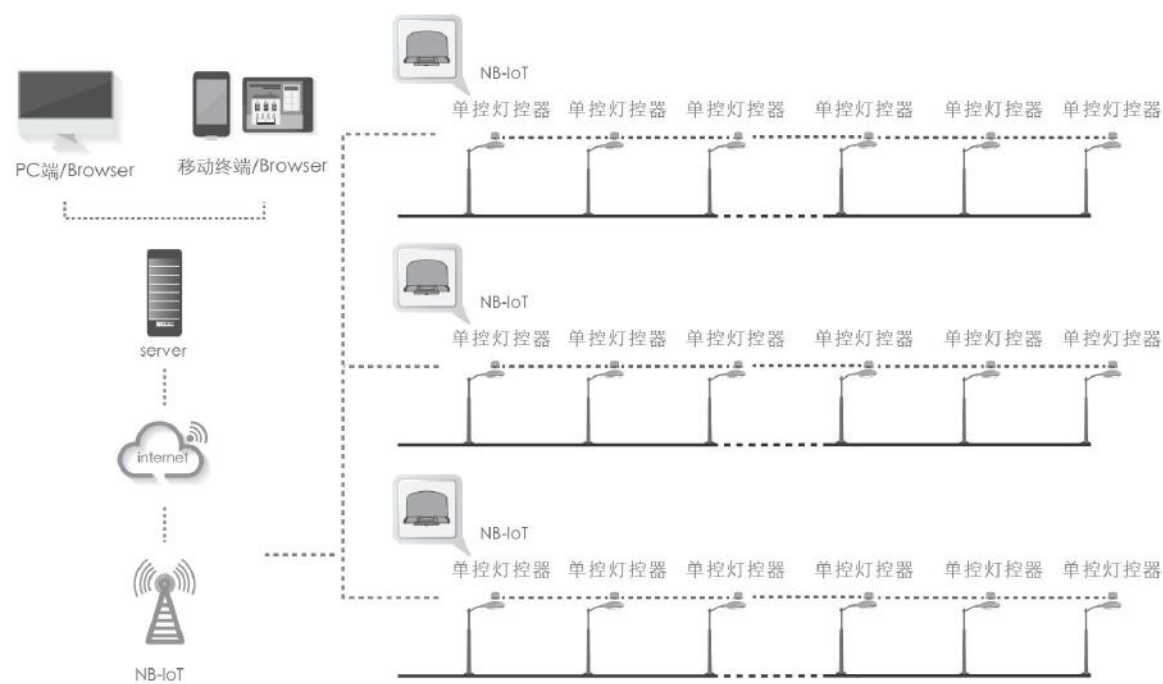
Power Supply	Rated voltage: 12~24VDC
Power consumption	1.5W
Spectral Acquisition Range	Range: 0.01~64000Lux Accuracy: $\pm 2\%$ Wavelength: 350~1100nm, Central: 550nm
Turn on Illuminance	100Lux (± 10)
Turn off Illuminance	Reflected light +40Lux (± 10) Lower limit: 50+40Lux (± 10) Upper limit: 6000Lux (± 100)
Reflected light compensation upper limit	6000Lux (± 100)
Dimming interface	0~10V
Default maximum power ratio	80%
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode
Turn on delay	5S
Turn off delay	20S
0~100%或 100~0% Brightness change time	8S
NB-IOT	Frequency band: B1/B3/B5/B8/B20 Transmitting power: 23dBm ± 2 dB Receiving sensitivity: -129dBm
Network Protocol	MQTT
SIM	NANO USIM
OTA	DFOTA
Green LED	Steady on: The SIM card is successfully identified

BLUE LED	Flicker: NB-IOT injection network Steady on: NB-IOT is successfully networked
Default periodic reporting frequency	10 minute
ESD	IEC61000-4-2 Contact discharge: $\pm 8\text{kV}$, CLASS B Air discharge: $\pm 15\text{kV}$, CLASS B
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	$-40^{\circ}\text{C} \sim 70^{\circ}\text{C}$
Storage Temperature	$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$
Operating Humidity	5%RH~99%RH
IP Level	IP66

Features

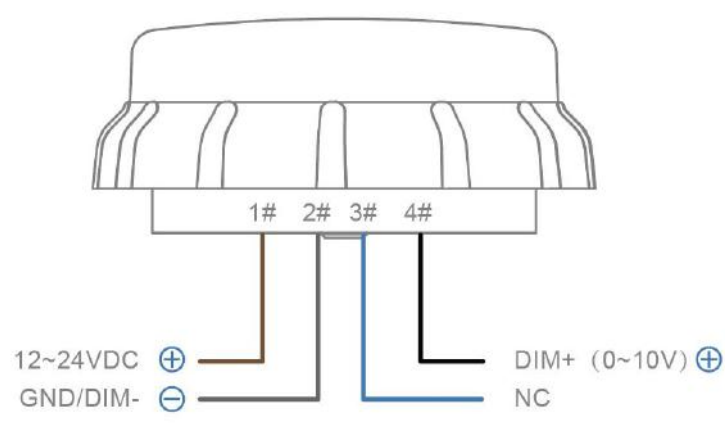
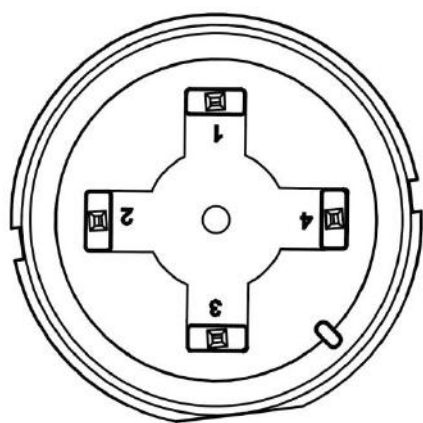
- B1/B3/B5/B8/B20, support most of the countries/regions in the world
- Zhaga Book18
- Low power consumption
- MQTT
- 0.01~64000Lux Light sensing acquisition range
- The self-sensitive mode is switched automatically when the network is disconnected
- 0~10V dimming
- Interference light source anti-error trigger
- Reflected light compensation
- DFOTA
- Undervoltage alarm
- RTC
- IP66

Network architecture

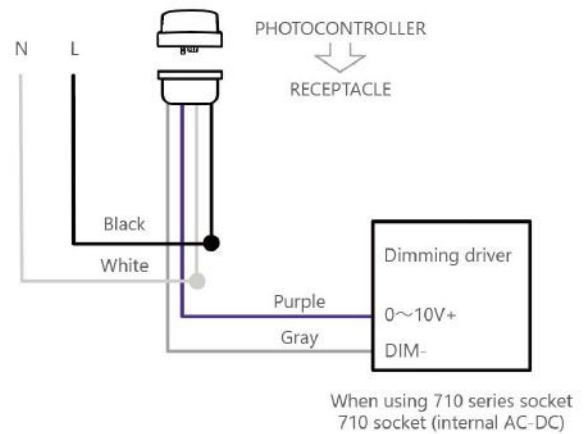
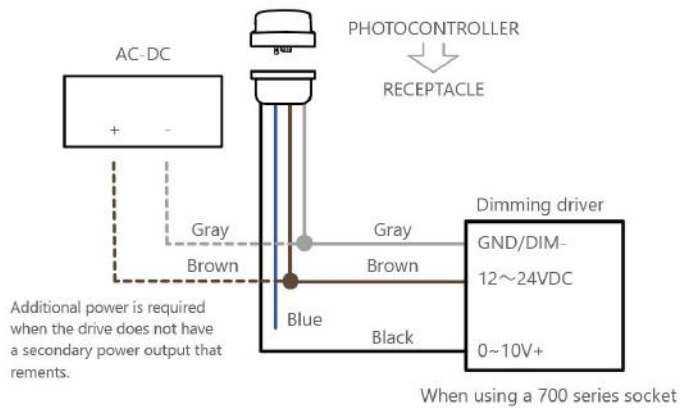


PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	NC	Signal Output
4	DIM+ (0~10V)	Signal Output



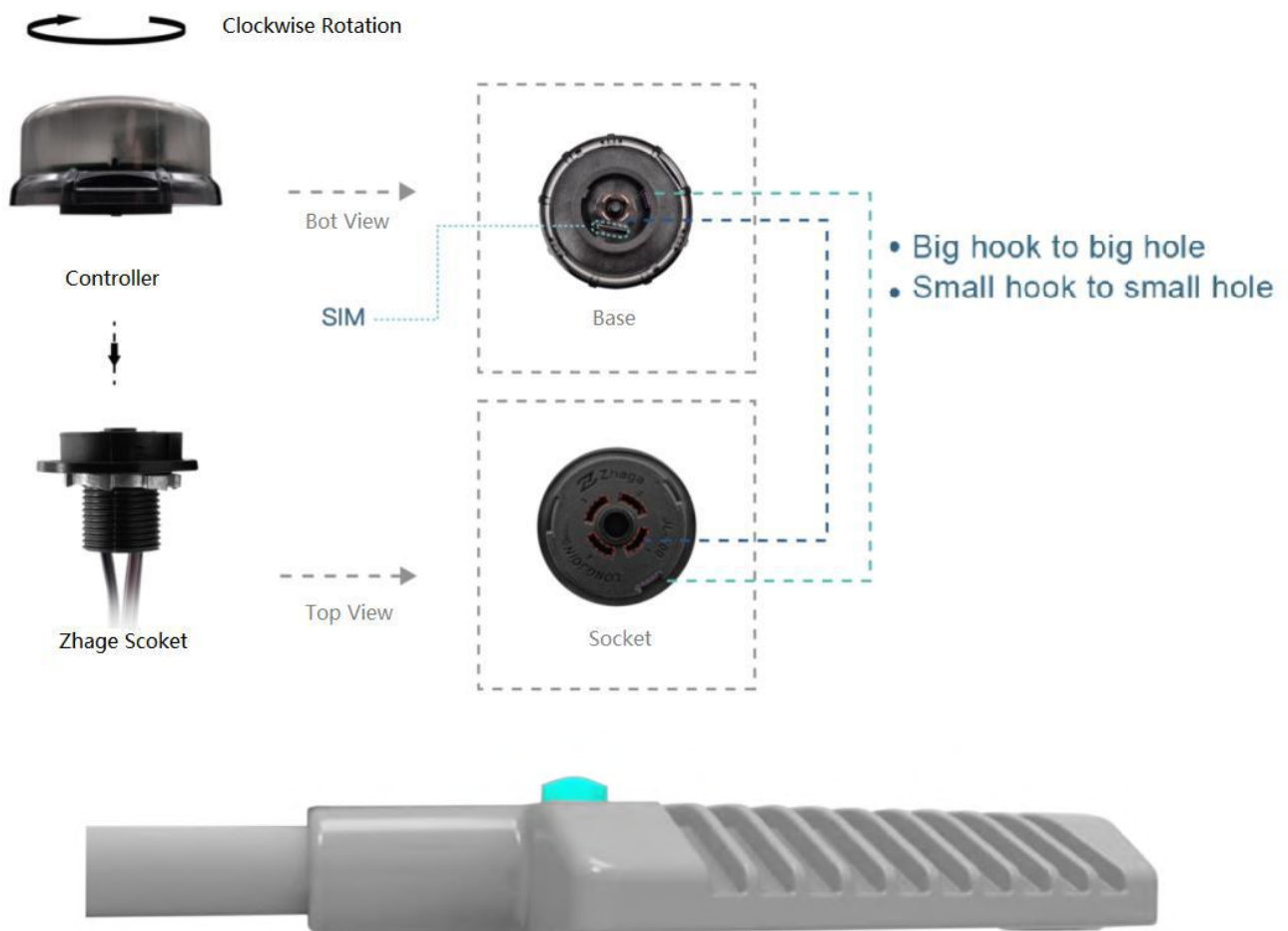
Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.

The SIM card slot is located in the circular area at the bottom of the product. See the picture below.



Top mounting



Bot mounting

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

JL-712A2B Zhaga Book-18 Controller



Product Summary

JL-712A2B light controller is a smart light controller developed based on ZHAGA BOOK18 interface standard. It adopts a combination sensor of light sensing and microwave sensing, 0-10V dimming signal, supports dual-mode configuration of dip switch and infrared remote control. The light controller is suitable for road, lawn, yard, park, parking lot, factory, warehouse and other lighting scenes.

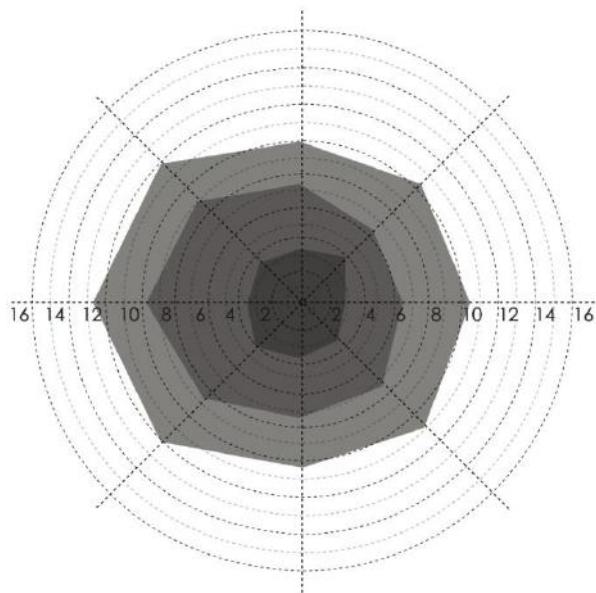
The working logic of the product is that when the illumination level is met to turn on, the lamp operates at a stand-by dim level. If a moving object is detected at this time, the lamp becomes turn on 100%, and after the hold time, it returns to stand-by dim level. When stand-by period is over or the illumination level is met to turn off, the lamp will be turned off.

Features

- 12-24VDC power supply, low power consumption
- ZHAGA BOOK18
- 0-10V
- Microwave frequency dynamic adjustment
- $\Phi 50.4 \times 35$ mm small size
- light + microwave sensors
- high performance microwave, 15 meters high, 6 m radius of the induction
- switch + infrared remote dual-mode configuration
- IP66

Parameters

Power supply	Voltage: 12~24VDC Current: 12V/60mA; 24V/30mA
Power consumption	< 0.6W
Dimming	0-10V
Sensors	Light+Microwave
Spectral acquisition range	Range: 0.01~64000Lux Wavelength: 350~1100nm, Peak 550nm
Microwave frequency	5.8GHz
Maximum hanging height	15m
Sensing radius	4-8m
Sensitivity	Default 100%, adjust through IR/Dip switch
Hold time	Default 30S, adjust through IR/Dip switch
Stand-by dim level	Default 0%, adjust through IR/Dip switch
Stand-by period	Default ∞, adjust through IR
Turn on Illuminance	Default ∞, adjust through IR/Dip switch
Reflected light compensation	Default Δ50lux, adjust through IR
Maximum power ratio	Default 100%, adjust through IR
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	CE、RED、ROHS



Indoor installation with a height of 15 meters

Dip Switch



Stand-by brightness			Hold time		Turn on Illuminance		Sensitivity	
	1			2		3		4
I	0	20%	I	0 5S	I	0 50Lux	I	0 75%
II	1	0%	II	1 30S	II	1 Disable	II	1 100%
Default 1			Default 1		Default 1		Default 1	

IR controller



Icon	Function	Default	Adjustable range
	Sensitivity	100%	10%/20%/30%/40%/50%/60%/70%/80%/90%/100%/FF, FF equivalent to continuously triggered by induction
	Hold time	30S	5S/30S/1M/3M/5M/10M/20M/30M
	Stand-by dim level	20%	0%/10%/20%/30%/40%/50%
	Stand-by period	FF	5S/30S/1M/3M/5M/10M/20M/30M/FF, unit S, FF equivalent to infinity
	Turn on Illuminance	FF	2/10/20/30/50/80/100/150/200/250/300/350/400/FF, unit Lux, FF equivalent to infinity
	Reflected light compensation	50Lux	50/100/200/300
	Maximum power ratio	100%	50%/60%/70%/80%/90%/100%
	Unlock button		Other buttons must be unlocked before they can be used
	Configuration send button		Send all configuration parameters displayed on the screen
	Configuration erase button		Erase all parameters configured by the IR controller
	Turn on/off button		Turn on/off lamp
	Parameter type select button		Select different parameter items

	Parameter Value Select button		Select different parameter values for the currently selected parameter type
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Funtion examples

1) Turn on Illuminance: FF, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off whole day if no motion Turn on whole day if motion Hold time count down Turn off after hold time

2) Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Turn off after hold time

3) Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 20%, Hold time: 30S, Stand-by period: 1M



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Stand-by period count down after hold time



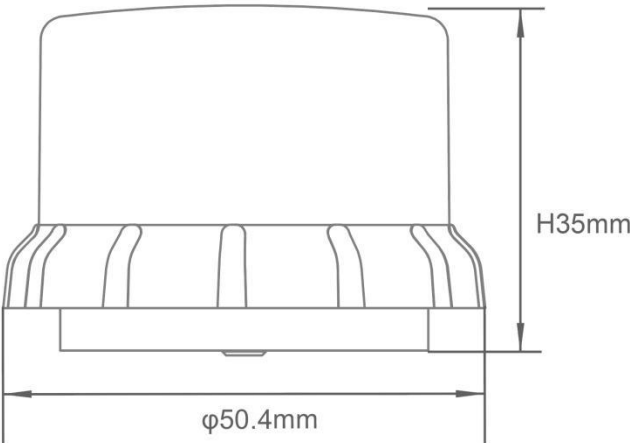
Turn off after stand-by period

4) Turn on Illuminance: 50Lux, Sensitivity: FF



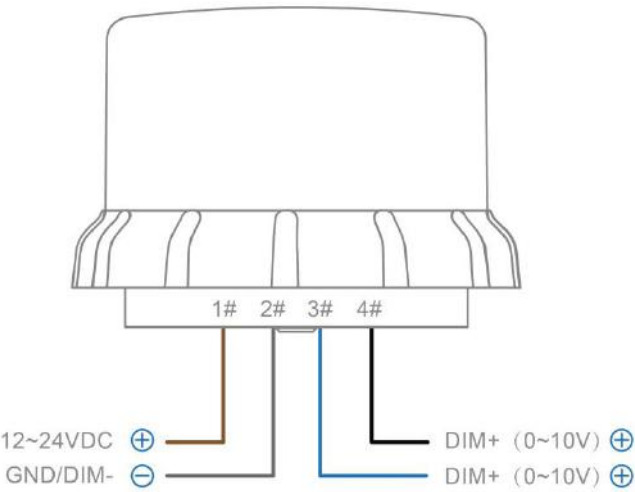
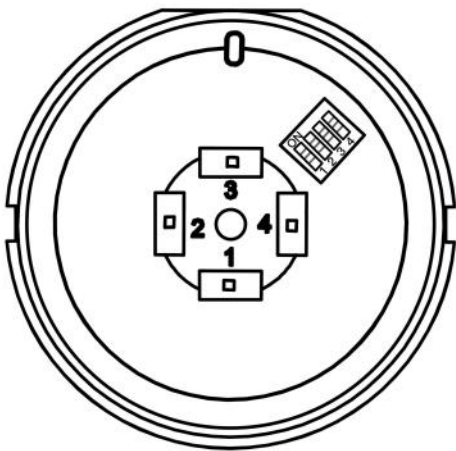
Turn off daytime Turn on night either motion or no motion

Size

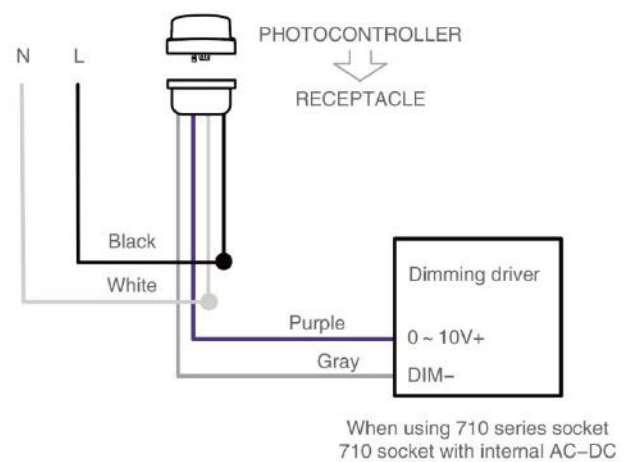
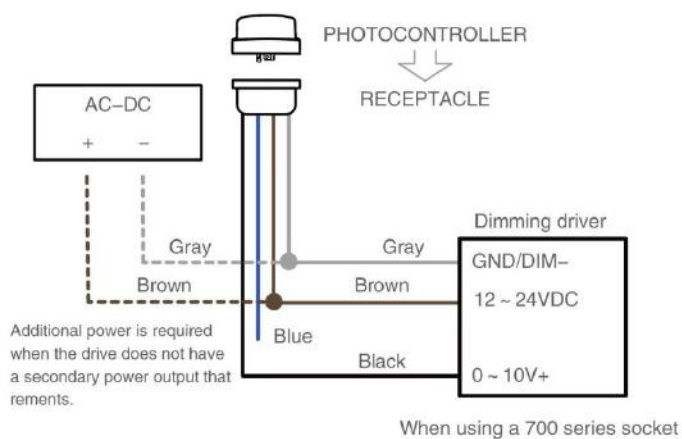


PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	DIM+ (0-10V+)	Signal Output
4	DIM+ (0-10V+)	Signal Output

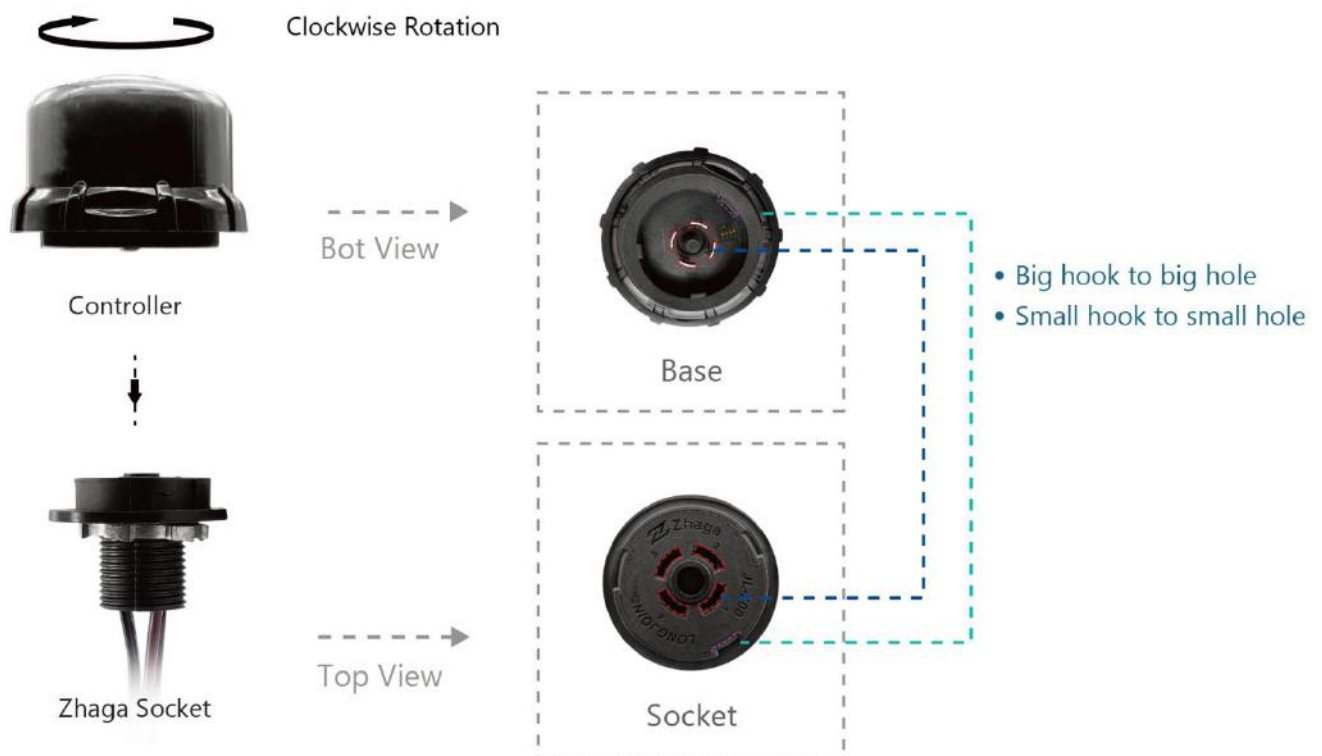


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.





Socket Options

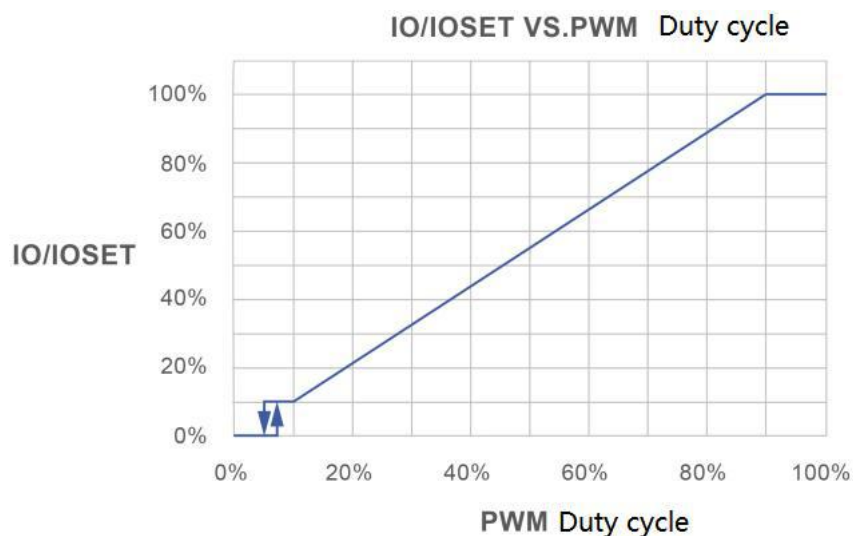
Model	Feature	Picture
JL-700	Normal	
JL-700W	No cable	
JL-700S	Short thread	
JL-700T	Contact pin	
JL-710	built-in power supply	

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.

If used in outdoor scenes, rain and swaying trees may accidentally trigger induction lights.

Avoid hanging installation to prevent the product from shaking and triggering the induction light by mistake.

The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.

JL-712A2H Zhaga Book-18 Zhaga Controller



Product Summary

The JL-712A2H light controller product is a smart latch type light controller developed based on the Zhaga Book-18 interface standard. It uses a combination of light sensing and microwave sensing sensors, can output 0-10V dimming signals, and supports infrared remote control for parameter configuration. This light controller is suitable for lighting scenarios such as roads, lawns, courtyards, parks, parking lots, factories, warehouses, etc.

The working logic of the product is that when the illumination is met, the lamp works at a slightly bright brightness and starts a countdown of the slightly bright duration. At this time, if a moving object is detected, the lamp becomes fully bright. When a moving object is detected and left, a countdown of the fully bright duration begins. After the countdown of the fully bright duration ends, it returns to the slightly bright brightness and starts a countdown of the slightly bright duration. When the countdown of the slightly bright duration ends or the illumination is met, the lamp is turned off.

Features

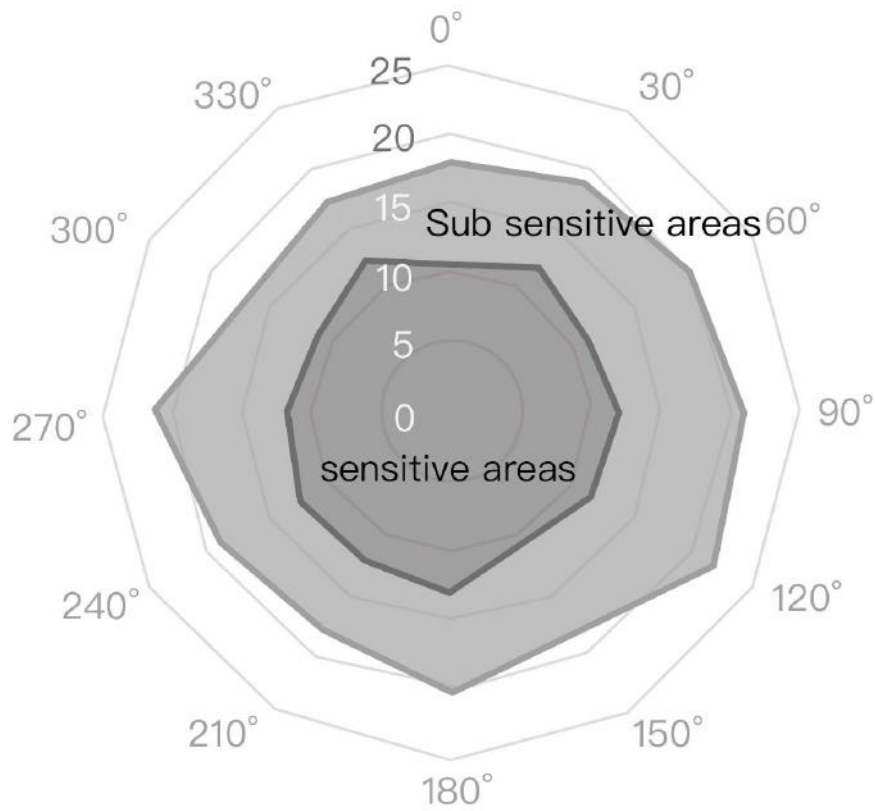
- 12-24VDC power supply, low power consumption
- Zhaga Book-18 interface standard
- 0-10V dimming mode
- Dynamic adjustment of microwave frequency to avoid mutual interference during dense installation
- Φ 50.4 * 35mm compact size, suitable for installation on various lighting fixtures

- Light sensitivity+microwave, on-demand lighting, more energy-efficient
- Visible light filtered photosensitive sensor
- High performance microwave, with a hanging height of 15 meters and an induction radius of ≥ 10 meters
- Infrared remote control
- IP66

Parameters

Power supply	Voltage: 12-24VDC Current: 12V/35mA; 24V/25mA
Power dissipation	$< 0.385W$ (12V) ; $< 0.55W$ (24V)
Dimming	0-10V
Sensors	Light sensitivity+microwave
Spectral range	avelength: 800~1100nm
Microwave frequency	5.8GHz
Maximum hanging height	15 meters
Induction radius	≥ 10 meters
Power on initialization	By default, it remains turn on for 5s (gradient) when powered on, and then runs properly based on parameter Settings and environment conditions
Sensitivity	Default 80%, adjust through IR
Hold time	Default 30S, adjust through IR
Stand-by dim level	Default 0%, adjust through IR
Stand-by period	Default infinite, adjust through IR
Turn on Illuminance	Default 50lux, adjust through IR
Turn off illuminance Δ value	Default Δ 50lux, adjust through IR
Turn off illuminance	Turn on Illuminance + Turn off illuminance Δ value
Maximum power ratio	Factory default 100%, adjust through IR

Off → Stand-by dim time	0.1S
Stand-by dim → 100% dim time	0.1S When the stand-by dim level is 0%, it lasts for 0.2s, which is equivalent Off → 100% dim time
100% dim → Stand-by dim time	8S When the stand-by dim level is 0%, it lasts for 9s, which is equivalent 100% dim → turn off time
Stand-by dim → turn off time	1S
mechanical vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40 °C~70 °C
Storage Temperature	-40 °C~85 °C
Operating Humidity	5% RH~99% RH
IP Level	IP66
Certifications	CE, ZHAGA, ROHS



Microwave induction schematic diagram - installation at a height of 15 meters

Infrared remote controller



Icon	Function	Default value	Adjustable range or function definition
	Sensitivity	80%	10%/20%/30%/40%/50%/60%/70%/80%/90%/100%/FF, FF equivalent to continuously triggered by induction
	Hold time	30S	5S/30S/1M/3M/5M/10M/20M/30M
	Stand-by dim level	0%	0%/10%/20%/30%/40%/50%
	Stand-by period	FF	5S/30S/1M/3M/5M/10M/20M/30M/FF, FF is equivalent to infinity
	Turn on Illuminance	50Lux	2/10/20/30/50/80/100/150/200/250/300/350/400/FF, FF is equivalent to any illuminance that meets the turn on Illuminance
	Turn on Illuminance Δ value	50Lux	50/100/200/300
	Maximum power ratio	100%	50%/60%/70%/80%/90%/100%
	Unlock button		Other buttons must be unlocked before they can be used. When no buttons are operated after 60 seconds, licking the configuration send button and long pressing the configuration erase button, the buttons will be locked again.
	Configuration send button		Send all configuration parameters displayed on the screen and lock the button again.

	Configuration erase button		Long press and hold for 3 seconds to erase all the parameters configured through the infrared remote control, restoring it to the factory default values (The device can be restored to factory Settings after being powered on or off for six consecutive times). After sending, the buttons will be locked again.
	Turn on/off button		To switch the on/off status of the lighting, need to press the  button or power on again to exit the on/off status.
	Apply mode switch button		Switch the lamps to automatic operation mode.
	Parameter select button		Select different parameter types.
	Parameter value select button		Select different parameter values for the currently selected parameter type.

Note: The infrared remote control controls a distance of about 20 meters, an angle of about $\pm 45^\circ$, and the display screen has backlight function.

General operating instructions:

- ① Press  button, Seeing parameters flashing on the remote control display screen.
- ② Press  button, Select the parameter item to be adjusted, and the flashing parameter item is the currently selected parameter item.

- ③ Press  button, Select specific parameter values for the selected parameter item.
- ④ Press  button, Send all parameter values on the display screen.
- ⑤ Press  button forced on/off lights.
- ⑥ Press  button, switch to automatic operation mode.
- ⑦ Press  button, erase the configured parameters and restore them to the factory default values.

Function examples

- Turn on Illuminance: FF, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off whole day if no motion Turn on whole day if motion Hold time count down Turn off after hold time

- Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Turn off after hold time

- Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 20%, Hold time: 30S, Stand-by period: 1M



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Stand-by period count down after hold time



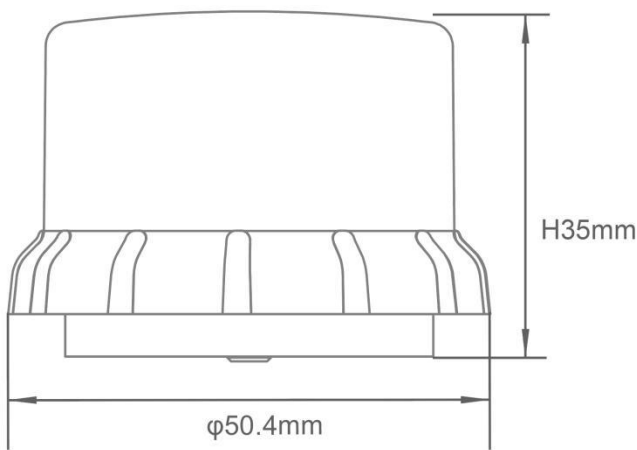
Turn off after stand-by period

- Turn on Illuminance: 50Lux, Sensitivity: FF



Turn off daytime Turn on night either motion or no motion

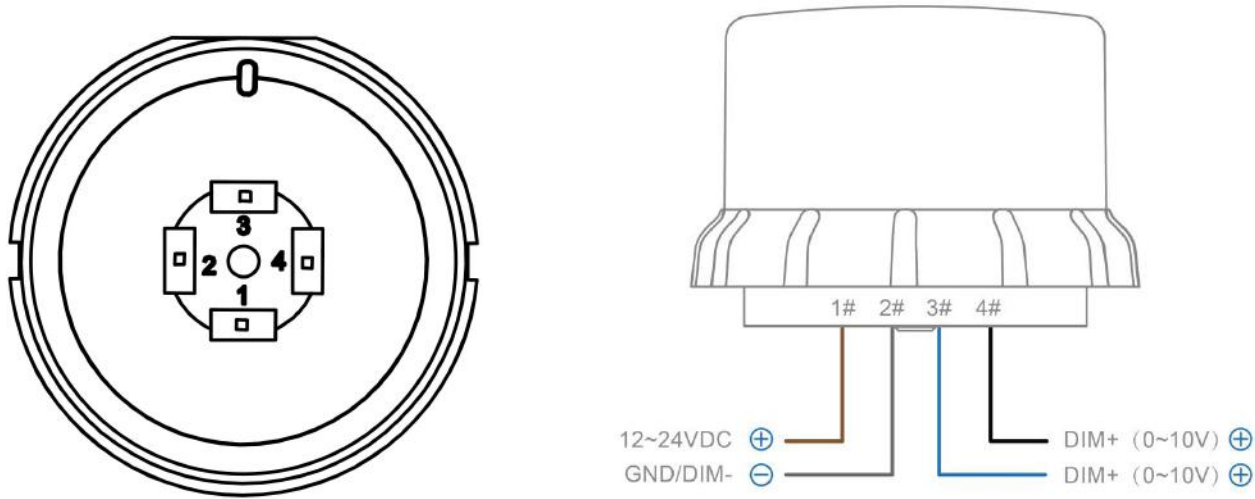
Dimension



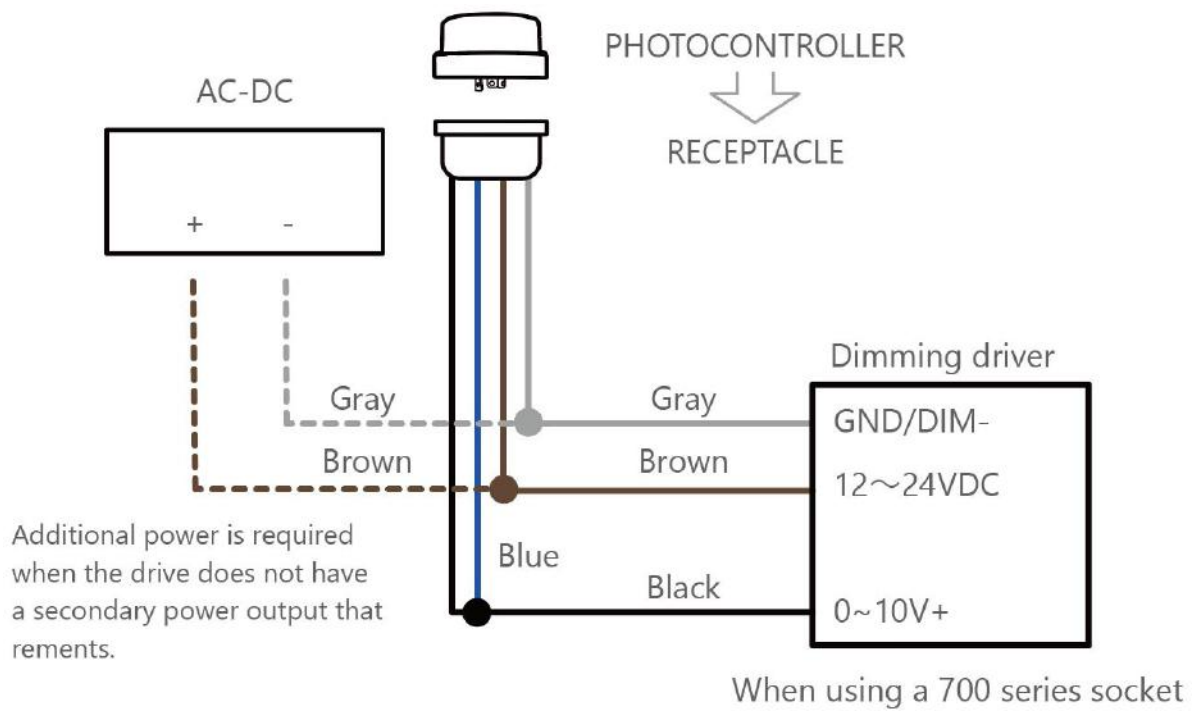
Pin

Pin number	Pin Definition	Types of
1	12~24VDC	Power input
2	GND/DIM-	Power input
3	DIM+ (0-10V+)	Signal output
4	DIM+ (0-10V+)	Signal output

Note: Both # 3 and # 4 output dimming positive electrodes at the same time. When wiring the socket, either one of them can be connected to the driver or both can be connected simultaneously. If not connected, it is recommended to use insulation wrapping treatment



Wiring diagram



Note: Either the black or blue line can be selected, and it can also be connected in parallel at the same time.

Install

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



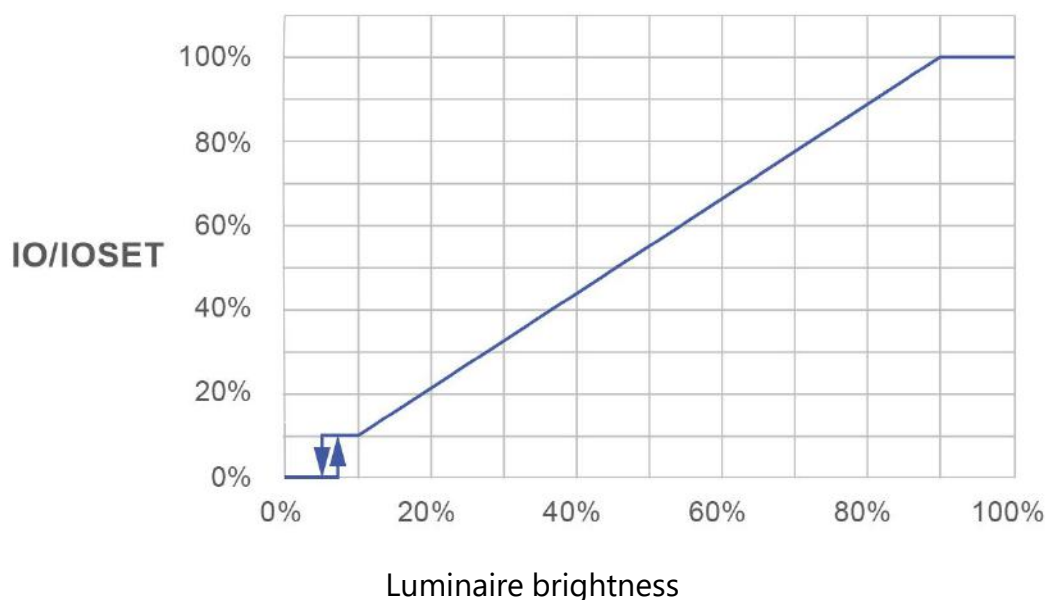
Recommended socket selection

Model	Feature	Picture
JL-700	Normal	
JL-700W	Self plugging	
JL-700S	Short threaded	
JL-700T	Probe	
JL-710	AC power	

Precautions

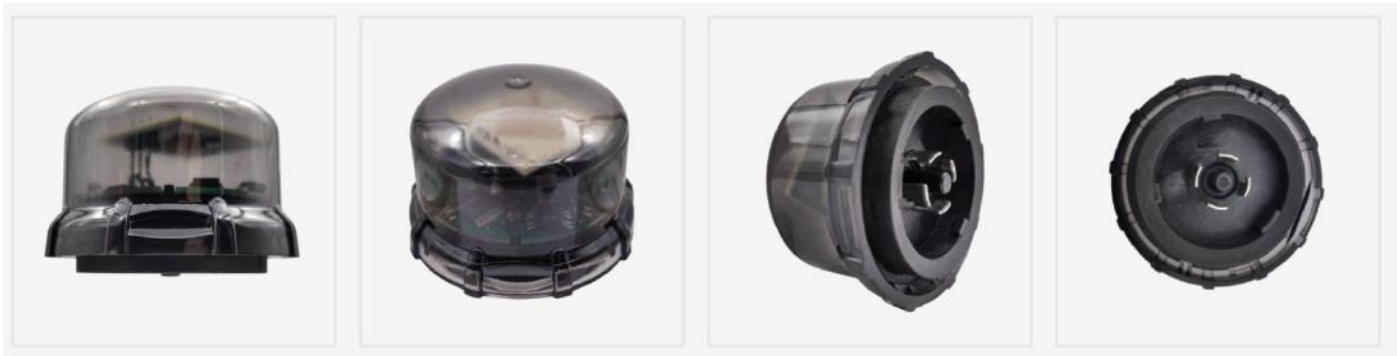
- 1. If the negative pole of the auxiliary power supply of the driver is separate from the negative pole of the dimming interface, they need to be short circuited and connected to the light controller # 2.
- 2. This product is mainly used for LED lamps, tungsten filament lamps and other lamps with a wide spectrum may turn off again after turning on the light.

3. Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



4. The light controller only outputs a dimming signal to the driver, regardless of the power load of the driver and light source.
5. When testing, do not use your fingers to block the photosensitive window, as the gaps between your fingers may pass through and cause the light to fail to turn on.
6. After power on initialization, if the lighting illumination and motion trigger conditions have been met, the light will be directly turned on to 100%, and it is not mandatory to enter stand-by dim level first.
7. There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.
8. If used in outdoor scenes, rain and swaying trees may turn on the light by mistake.
9. Avoid hanging installation to prevent the product from shaking and turn on the light by mistake.
10. The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.
11. Infrared remote controls are easily affected by sunlight, so when used outdoors during the day, the remote control distance and other performance may be reduced.
12. The microwave preheating time is 5 seconds, which means that the motion detection signal can only be triggered after the microwave module is powered on for 5 seconds.

JL-712A3 Zhaga Book-18 Zhaga Controller

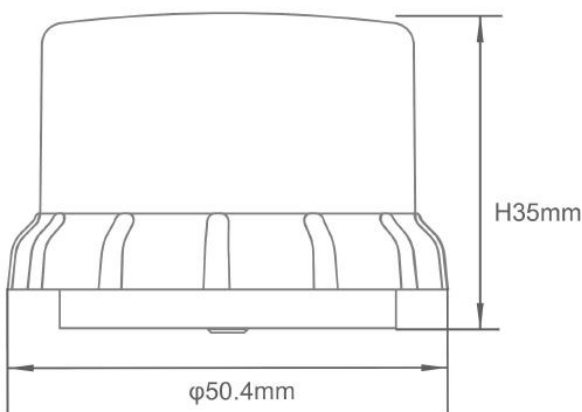


Product Summary

JL-712A3 light controller products are intelligent rotary lock light controllers developed based on ZHAGA BOOK18 interface standard. It adopts light sensing and microwave mobile combined sensor, which can output 0~10V dimming signal.

The light controller is suitable for lighting scenes such as roads, lawns, courtyards, parks, car park and construction site.

Product size chart



Parameters

Model	JL-712A3
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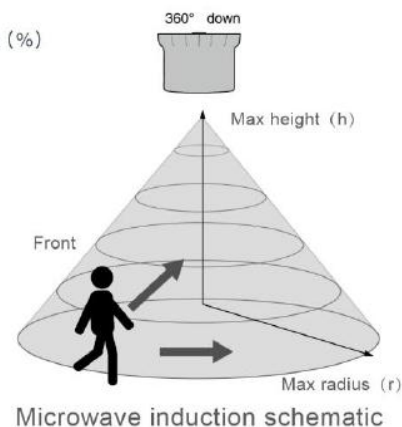
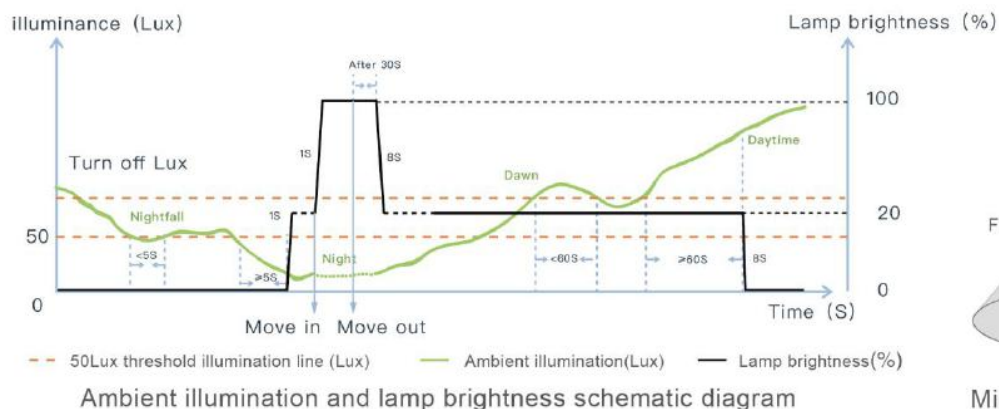
Power Supply	Rated voltage: 12~24VDC Rated current: 12V/45mA; 24V/30mA
Power Consumption	12V/3.5mA; 24V/3.5mA
Dimming	0/10V
Spectral Acquisition Range	350~1100nm, Peak wavelength 550nm
Dimming interface	Type: 0~10V ; Accuracy: $\pm 2\%$; Drive current: 40mA (Typical)
Turn on Illuminance	50Lux (± 10)
Turn off Illuminance	Reflected light + 40Lux (± 10) after each turn on Lower limit: 50+40Lux (± 10) ; Upper limit: 6000Lux (± 100)
Reflected light compensation upper limit	6000Lux (± 100)
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode ^{*1}
Turn on delay	5S
Turn off delay	60S
0%~20%; 20%~100% Brightness change time	1S
100%~20%; X%~0% Brightness change time	8S
100% brightness hold time after microwave trigger	30s
Stand-by Dimming	20%
Maximum hanging height of microwave	15M
Sensing radius	4-8M (by 15m hanging height)
Microwave induction angle	92°
Microwave anti-false trigger	Can prevent wind, rain, leaves, and small animals
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0

Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	 

Note :

*1 :

- a). If the light-emitting surface of the lamp is completely shielded and isolated from the light-sensitive surface of the light controller when installed, that is, no reflected light enters the light controller after the lamp is illuminated, then the light-off illuminance at this time is equal to the lower limit, that is, down The illuminance of the second turn off is approximately = the default turn on illuminance + 40 lux compensation value = 50 + 40 = 90 lux;
- b). If the installation fails to completely shield and isolate the light-emitting surface of the lamp and the light-sensitive surface of the light controller, that is, the reflected light enters the light controller after the lamp is illuminated. If the lamp is lit to 100%, the current environment collected by the light controller If the illuminance is 500lux, the illuminance of the next turn off is approximately = the current ambient illuminance+40=540lux;
- c). If the power of the lamp is high and the light-emitting surface is very close to the light-sensitive surface of the light controller, the reflected light exceeds the upper limit of compensation after the lamp is turned on to 100%, that is, the light controller detects that the ambient illuminance has been stable after turning on the light If it is greater than 6000lux, the light controller will automatically turn off the light after 60S.

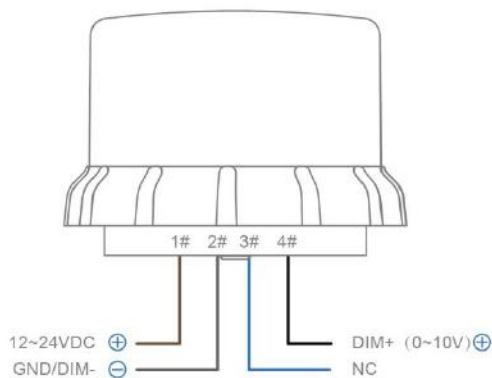
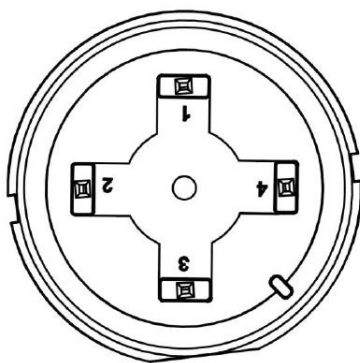


Features

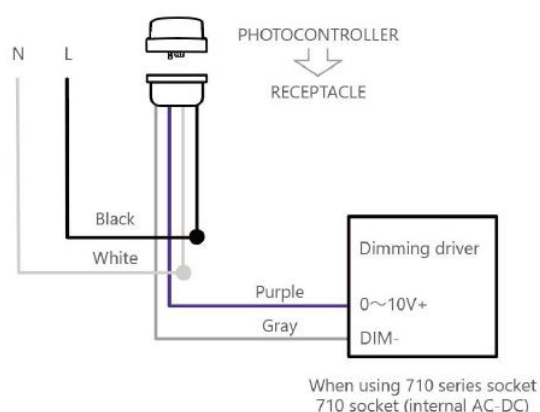
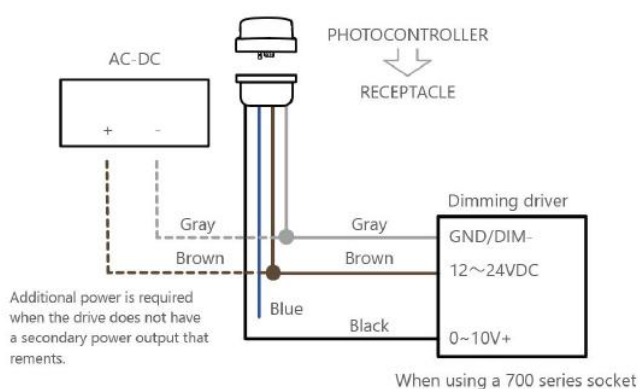
- light sense + microwave, lighting on demand, more humanized and power saving
- microwave anti false triggering, indoor and outdoor
- automatic dynamic microwave frequency adjustment to avoid mutual interference in dense installation
- comply with zhaga book18 interface standard
- DC power supply, ultra low power consumption
- support 0 ~ 10V dimming mode
- compact size, suitable for installation to various lamps
- anti false triggering design of interference light source
- reflected light compensation design of lamps
- waterproof protection grade up to IP66

PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	NC	Signal Output
4	DIM+ (0-10V+)	Signal Output

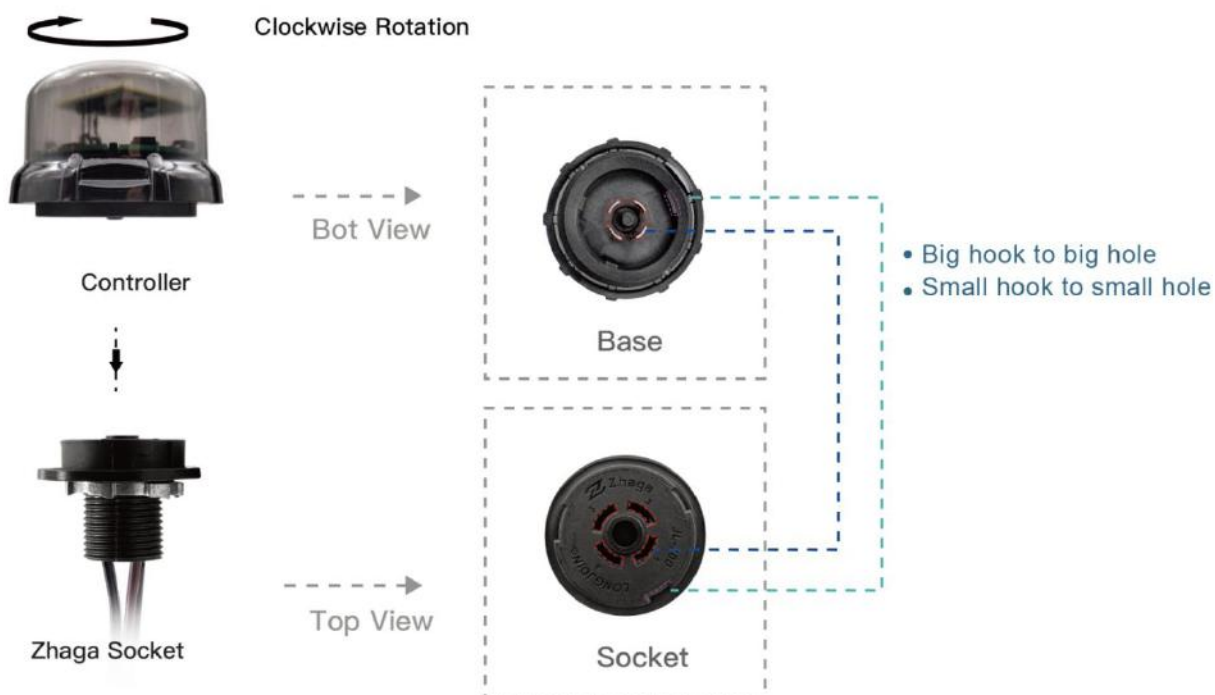


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

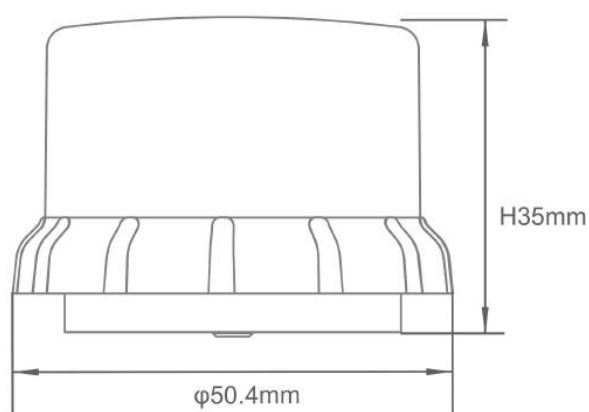
JL-712B2 Zhaga Book-18 Zhaga Controller



Product Summary

JL-712B2 is based on ZHAGA BOOK18 interface standard development of intelligent lock type light controller, using light sensing + microwave mobile combination sensor, can output 0~10V dimming signal, at the same time equipped with Bluetooth mesh communication network, can be controlled and configured through APP. The lamp controller is suitable for roads, lawns, courtyards, parks, parking lots, industrial mines and other lighting scenes. The special envoy is the UFO lamp with zhaga socket.

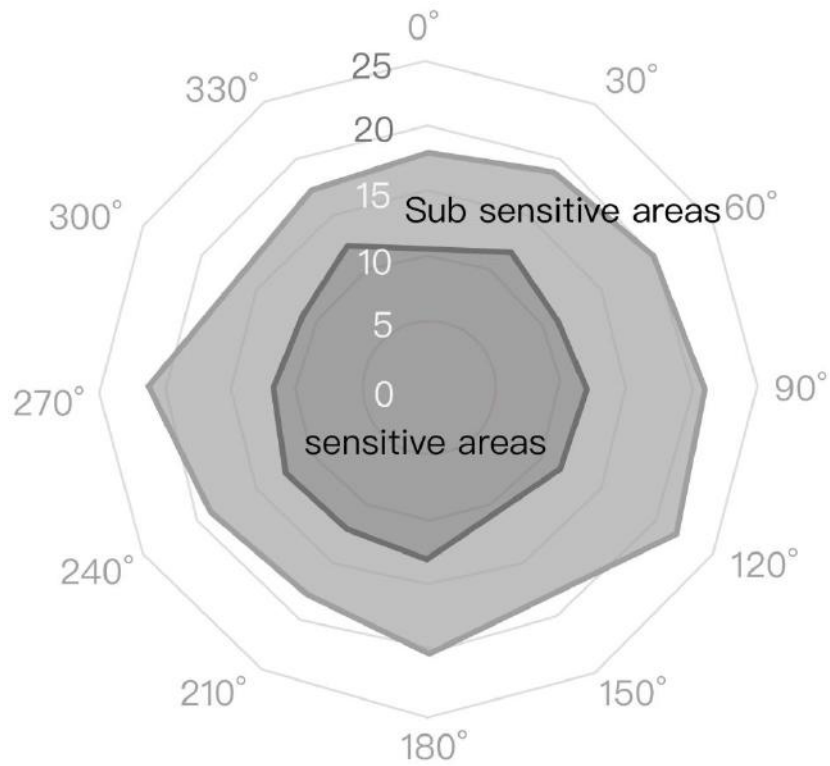
Product size chart



Parameters

Model	JL-712B2
-------	----------

Power Supply	Rated voltage: 12~24VDC Rated current: 40mA
Power Consumption	< 0.6W
Sensor Type	Light-sensitive + Microwave
Spectral Acquisition Range	860~1100nm, Peak wavelength 960nm
Maximum hanging height of microwave	15M
Sensing radius	>10m (by 15m hanging height)
Anti-jump delay	3S (minimum interval time for turning on the light after the light is off)
Hold time	Default 30S, APP adjustable
Stand-By brightness	Default 0%, APP adjustable
Stand-By time	Default 5S, APP adjustable
Dimming interface	Type: 0~10V Accuracy: $\pm 2\%$
Turn on Illuminance	APP adjustable, divided into 5 levels: Daytime: any illuminance Dusk Evening Night Late at night
Energy saving strategy	custom
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	 



Schematic diagram of microwave induction - indoor installation at a height of 15 meters

Features

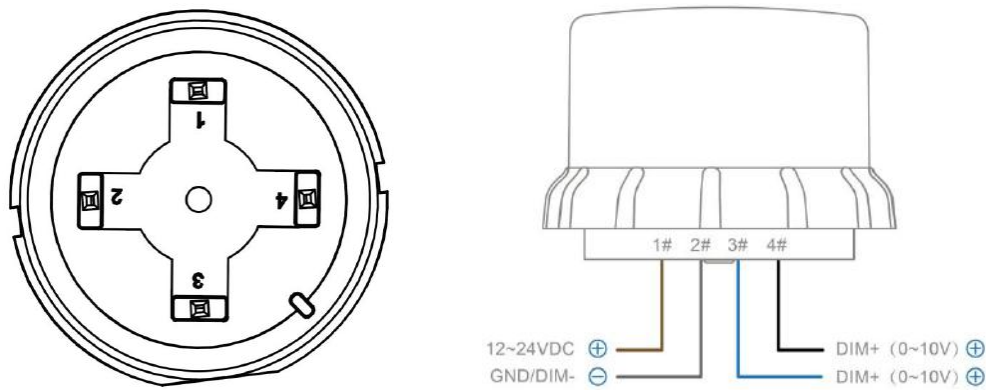
- 12 to 24 VDC power supply, low power consumption
- ZHAGA BOOK18 interface standard
- Automatic dynamic microwave frequency adjustment to avoid mutual interference in dense installation
- $\Phi 50 \times 36$ mm size, suitable for installation in most lamps
- 0~10V dimming interface
- Light sensor + microwave sensor, on-demand lighting, more power saving
- 15m hanging height
- BLE MESH
- Support third-party voice control, such as Alexa, Google Assistant, SmartThings, IFTTT, Xiaodu, Tencent Xiaowei, Dingdong, etc.
- IP66

PIN

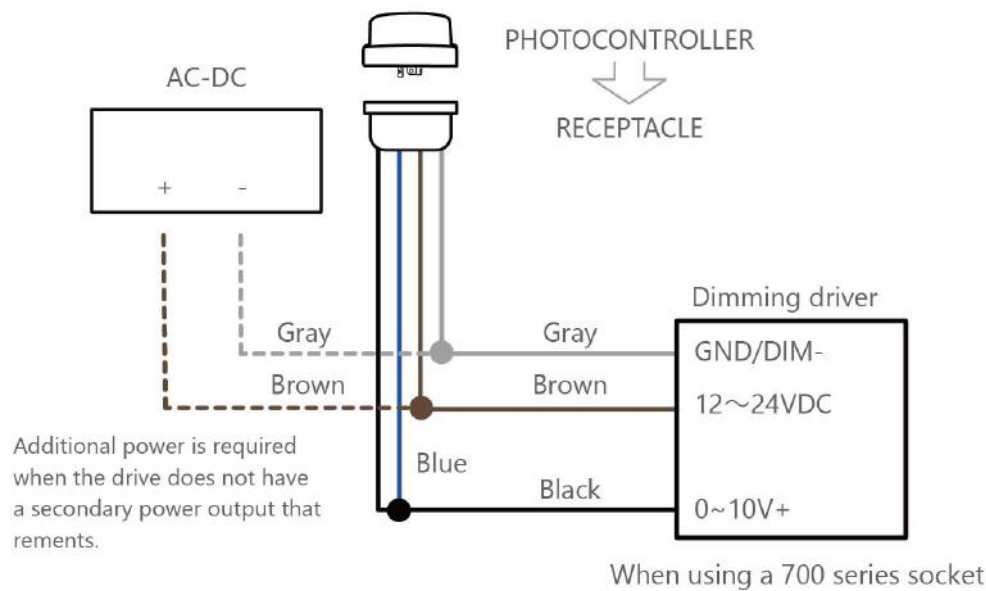
PIN	Definition	Type
-----	------------	------

1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	DIM+ (0~10V+)	Signal Output
4	DIM+ (0~10V+)	Signal Output

Note: Both # 3 and # 4 output dimming positive electrodes at the same time. When wiring the socket, either one of them can be connected to the driver or both can be connected simultaneously. If not connected, it is recommended to use insulation wrapping treatment



Wiring diagram



Note: Either black or blue wire can be selected, and it can also be connected in parallel at the same time

Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Socket recommendation

Model	Type	Picture
-------	------	---------

JL-700	General	
JL-700W	Without cable	
JL-700S	Short thread	
JL-700T	Pin	
JL-770	US (Z10)	
JL-710	built-in 24VDC power supply	

APP application

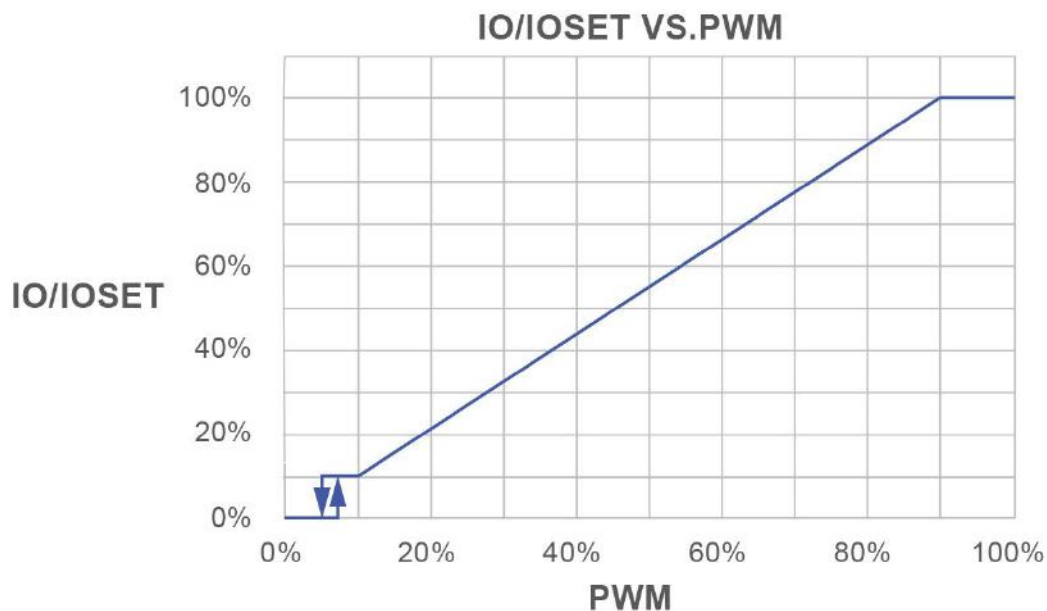
Please view the special introduction document or video.

Attentions

1) If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

2) If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

3) Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



4) The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

5) Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

JL-712B2A2 Zhaga Book-18 Zhaga Controller



Product Summary

The JL-712B2A2 light controller product is a smart latch type light controller developed based on the Zhaga Book-18 interface standard. It uses a combination of light sensing and microwave sensing sensors, can output 0-10V dimming signals, and support Casambi Bluetooth mesh communication network. It can be controlled by Bluetooth near field, or be controlled remotely by Bluetooth gateway. You can configure parameters and scenarios using the Casambi APP . This light controller is suitable for lighting scenarios such as roads, lawns, courtyards, parks, parking lots, factories, warehouses, etc.

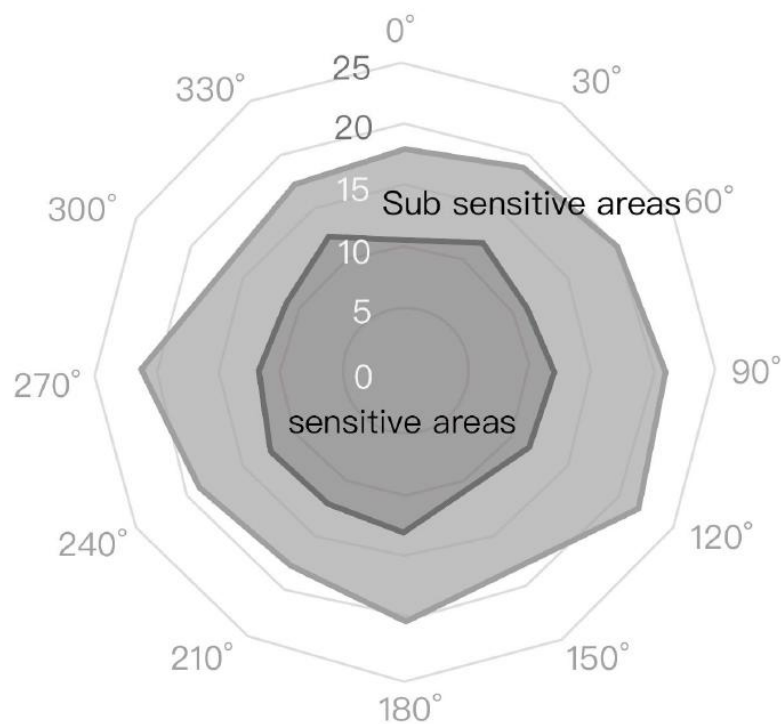
Features

- 12-24VDC power supply, low power consumption
- Zhaga Book-18 interface standard
- 0-10V dimming mode
- Dynamic adjustment of microwave frequency to avoid mutual interference during dense installation
- Φ 50.4 * 35mm compact size, suitable for installation on various lighting fixtures
- Light sensitivity+microwave, on-demand lighting, more energy-efficient
- Visible light filtered photosensitive sensor

- High performance microwave, with a hanging height of 15 meters and an induction radius of ≥ 10 meters
- CASAMBI BLE MESH
- IP66

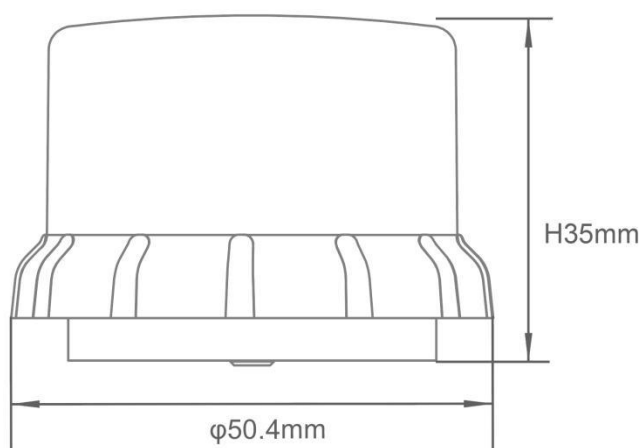
Parameters

Power supply	Voltage: 12-24VDC Current: 12V/35mA; 24V/25mA
Power dissipation	$< 0.385\text{W}$ (12V) ; $< 0.55\text{W}$ (24V)
Dimming	0-10V
Sensors	Light sensitivity+microwave
Spectral range	800~1100nm
Microwave frequency	5.8GHz
Maximum hanging height	15 meters
Induction radius	≥ 10 meters
Start-up time	$< 200\text{mS}$
Sensitivity	Default 80%, adjust through APP
Scene	Custom scenes can be created and edited through the APP
mechanical vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	$-40\text{ }^{\circ}\text{C} \sim 70\text{ }^{\circ}\text{C}$
Storage Temperature	$-40\text{ }^{\circ}\text{C} \sim 85\text{ }^{\circ}\text{C}$
Operating Humidity	5% RH~99% RH
IP Level	IP66
Certifications	CE, ZHAGA, ROHS



Microwave induction schematic diagram - installation at a height of 15 meters

Dimension

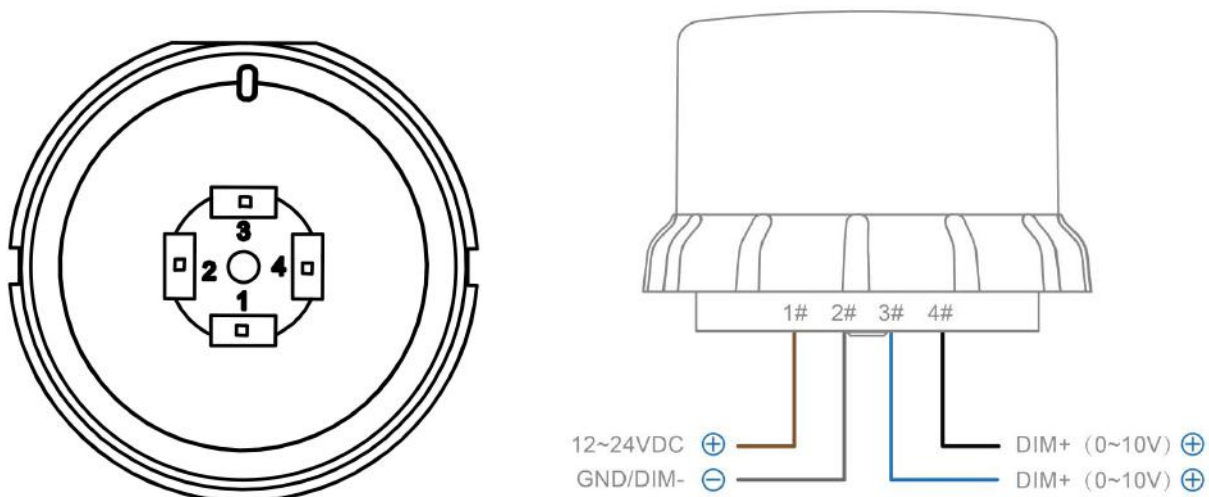


Pin

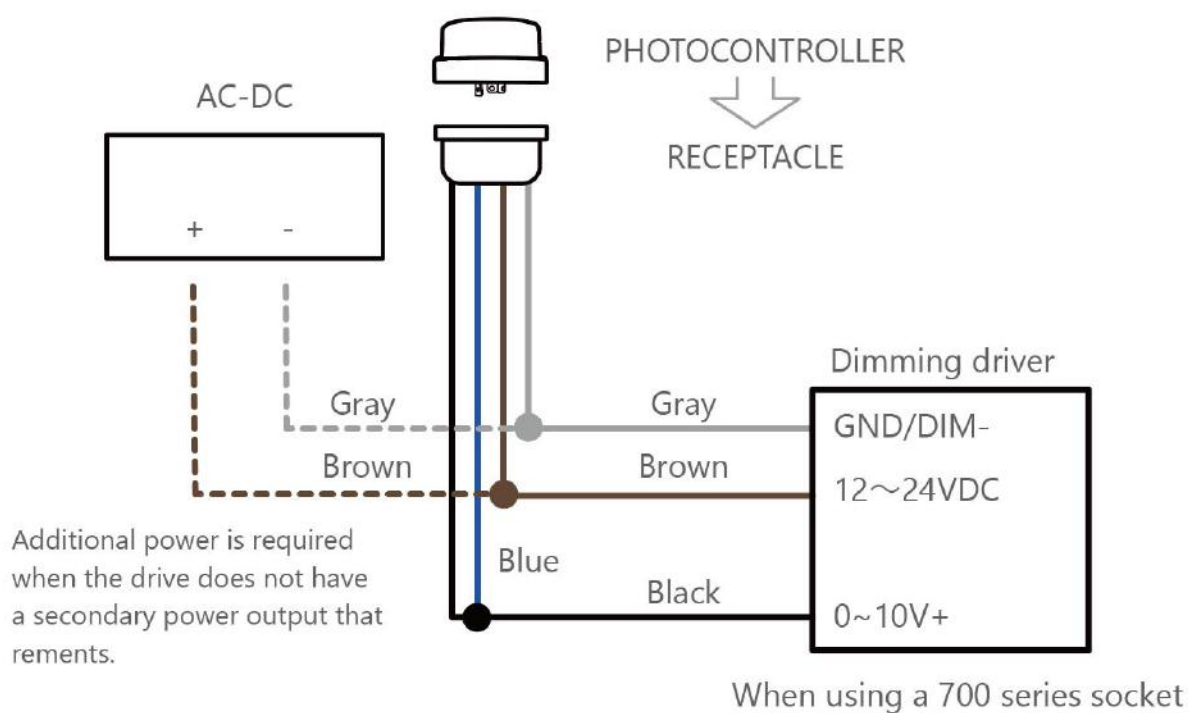
Pin number	Pin Definition	Types of
1	12~24VDC	Power input

2	GND/DIM-	Power input
3	DIM+ (0-10V+)	Signal output
4	DIM+ (0-10V+)	Signal output

Note: Both # 3 and # 4 output dimming positive electrodes at the same time. When wiring the socket, either one of them can be connected to the driver or both can be connected simultaneously. If not connected, it is recommended to use insulation wrapping treatment



Wiring diagram



Note: Either the black or blue line can be selected, and it can also be connected in parallel at the same time.

Install

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



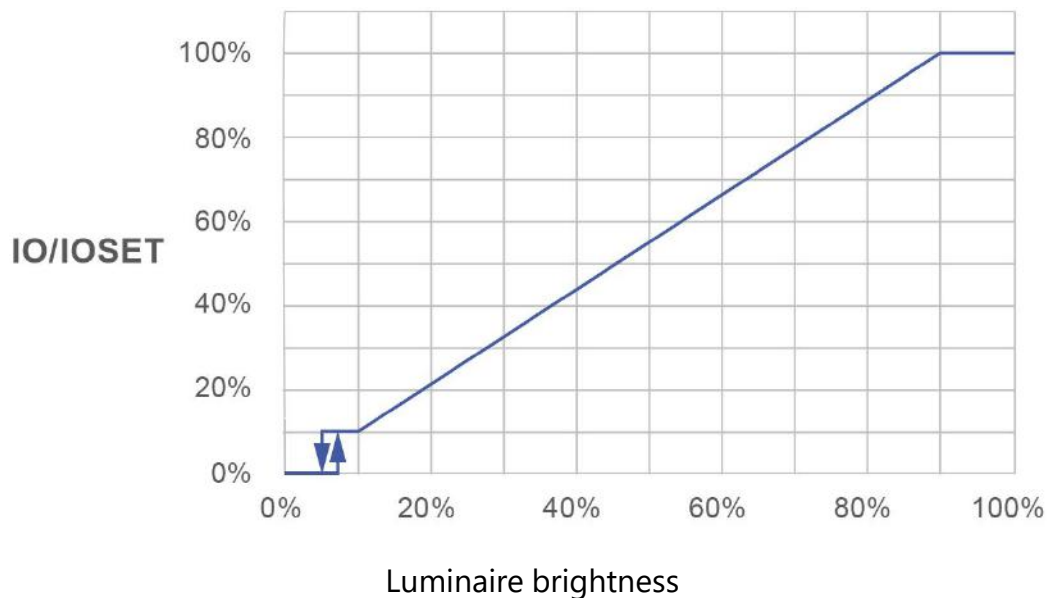
Recommended socket selection

Model	Feature	Picture
JL-700	Normal	
JL-700W	Self plugging	
JL-700S	Short threaded	
JL-700T	Probe	
JL-710	AC power	

Precautions

1. If the negative pole of the auxiliary power supply of the driver is separate from the negative pole of the dimming interface, they need to be short circuited and connected to the light controller # 2.

2. This product is mainly used for LED lamps, tungsten filament lamps and other lamps with a wide spectrum may turn off again after turning on the light.
3. Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



4. The light controller only outputs a dimming signal to the driver, regardless of the power load of the driver and light source.
5. When testing, do not use your fingers to block the photosensitive window, as the gaps between your fingers may pass through and cause the light to fail to turn on.
6. There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.
7. If used in outdoor scenes, rain and swaying trees may turn on the light by mistake.
8. Avoid hanging installation to prevent the product from shaking and turn on the light by mistake.
9. The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.
10. The microwave preheating time is 5 seconds max, which means that the motion detection signal can only be triggered after the microwave module is powered on for 5 seconds max.

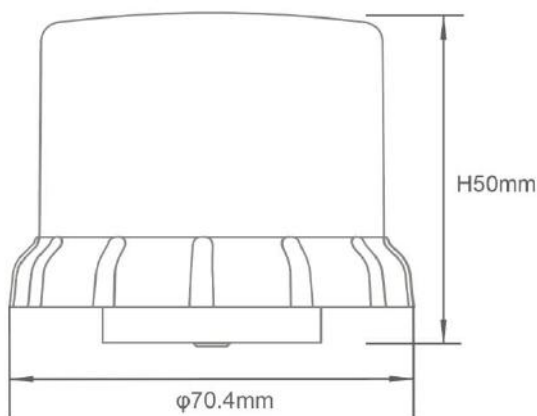
JL-712G3L Zhaga Book-18 Zhaga Controller



Product Summary

The JL-712G3L single lamp intelligent controller adopts the wireless communication mode of LTE CAT1, which has the ability of light sensing and microwave sensing, and supports local wireless linkage function. It can still be linked when the network is disconnected. The dimming output mode is 0-10V. You can use our UM9900 management system for remote monitoring and configuration. This product is only suitable for detecting pedestrians and low-speed vehicles <20km/h.

Product size chart



Parameters

Power Supply	Rated voltage: 12~24VDC, 3W It is recommended that the transient current response capacity reach 1A
--------------	--

Average power consumption	1.2W
Dimming Interface	Type: 0~10V Accuracy: $\pm 2\%$ Drive Current: 20mA (Typical)
Communication	LTE+Sub-G
Spectral Acquisition Range	Range: 0.01~64000Lux Accuracy: $\pm 2\%$ Wavelength: 350~1100nm, Peak wavelength: 550nm
Turn on Illuminance	100Lux (± 10)
Turn off Illuminance	Reflected light + 40Lux(± 10)after each turn on Lower limit: 50+40Lux(± 10); Upper limit: 6000Lux (± 100)
Reflected light compensation upper limit	6000Lux (± 100)
Microwave parameters	Frequency: 5.8 GHz Supported hanging height: < 15m Sensing radius: 4-6 meters Sensing angle: <92 °
Linkage distance	$\leq 1\text{km}$
Default Tiny Brightness	20%
Default Tiny Light Maintenance Duration	permanent
Default trigger brightness	100%
Default trigger brightness maintenance duration	30S
Default Maximum Power Ratio	80%
Sensing radius	4-8m (by 15m hanging height)
Initialization Action	After startup, the light is turned on at 100% brightness by default, and it is taken over by the device operation mode after 5S
Lamp on delay	10S
Lamp off delay	10S
Duration of microwave induction light on	Default 30S platform adjustable
Microwave error prevention trigger	Possess certain ability to prevent wind, rain, leaves, and small animals

Trace brightness	Default 20% platform adjustable
Slightly bright duration	Default permanent platform adjustable
Network Protocol	MQTT
SIM card	Cato plug-in type Supports 1.8V USIM cards NANO package
Remote upgrade	Sustain OTA
Green LED Indicator Light	Chang Liang: Successfully connected base stations
Blue LED Indicator Light	Blinking: Connecting to the server Always on: Successfully connected to the server
Default periodic reporting frequency	10 minute
Energy saving strategy	custom
Electrostatic discharge immunity	Contact discharge: $\pm 8\text{kV}$, CLASSB Air discharge: $\pm 15\text{kV}$, CLASS B
Operating Temperature	$-40^{\circ}\text{C}\sim 70^{\circ}\text{C}$
Storage Temperature	$-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$
Operating Humidity	5%RH~96%RH
IP Level	IP66
Structural material	foundation bed: PBT Shell: PC
Standard	IEC61000-4-2、GB/T2423.10-2008、UL94-V0
Certifications	 

Note:

All brightness is based on the maximum power ratio and the current light attenuation compensation ratio.

Examples of explanation of reflected light compensation mechanism:

a). If the light-emitting surface of the lamp is completely shielded and isolated from the light-sensitive surface of the light controller when installed, that is, no reflected light enters the

light controller after the lamp is illuminated, then the light-off illuminance at this time is equal to the lower limit, that is, down The illuminance of the second turn off is approximately = the default turn on illuminance + 40 lux compensation value = 50 + 40 = 90 lux;

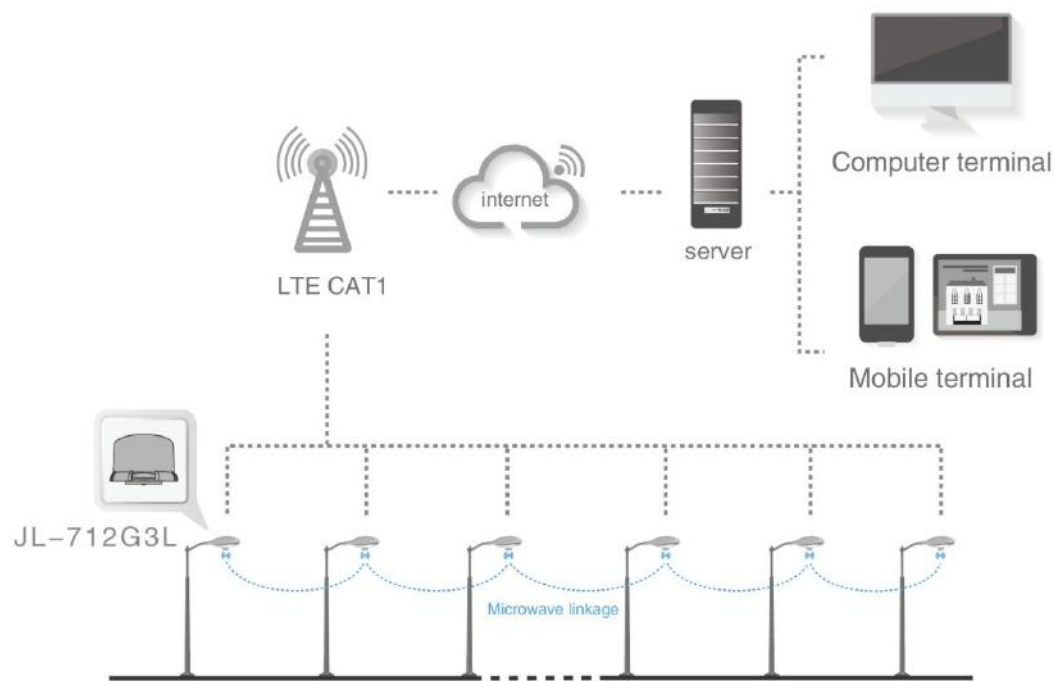
b). If the installation fails to completely shield and isolate the light-emitting surface of the lamp and the light-sensitive surface of the light controller, that is, the reflected light enters the light controller after the lamp is illuminated. If the lamp is lit to 100%, the current environment collected by the light controller If the illuminance is 500lux, the illuminance of the next turn off is approximately = the current ambient illuminance+40=540lux;

c). If the power of the lamp is high and the light-emitting surface is very close to the light-sensitive surface of the light controller, the reflected light exceeds the upper limit of compensation after the lamp is turned on to 100%, that is, the light controller detects that the ambient illuminance has been stable after turning on the light If it is greater than 6000lux, the light controller will automatically turn off the light after 60S.

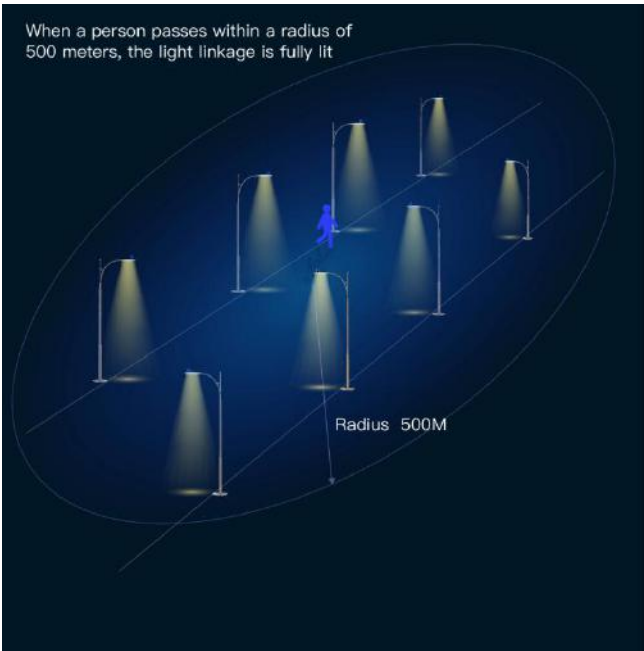
Features

- ZHAGA standard interface
- LTE Cat.1 communication
- Synergia Modes Remote Configuration
- Motion sensing upto 15m height
- Synergizing coverage upto 1km
- Anti-mulfunction for outdoor purpose
- Self-cycling prevented
- LED Decay compensation built-in
- Multi-sensing Strategy
- Fault Dianosis & Report
- MQTT Server Online Miguration Support

Network architecture



Overall network architecture diagram



Linkage diagram based on trigger radius

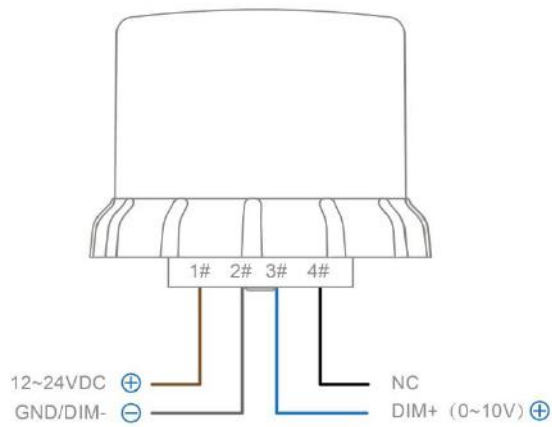
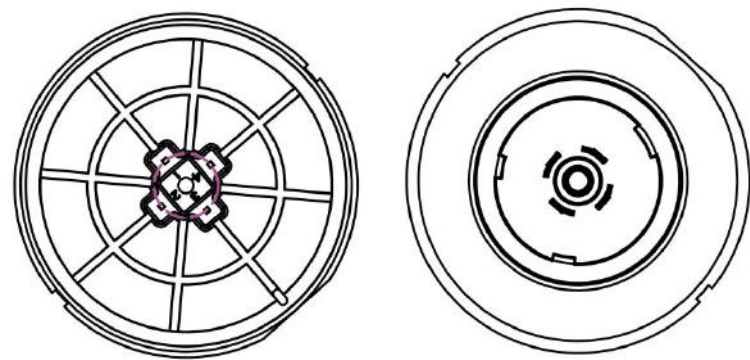


Schematic diagram of sequential linkage

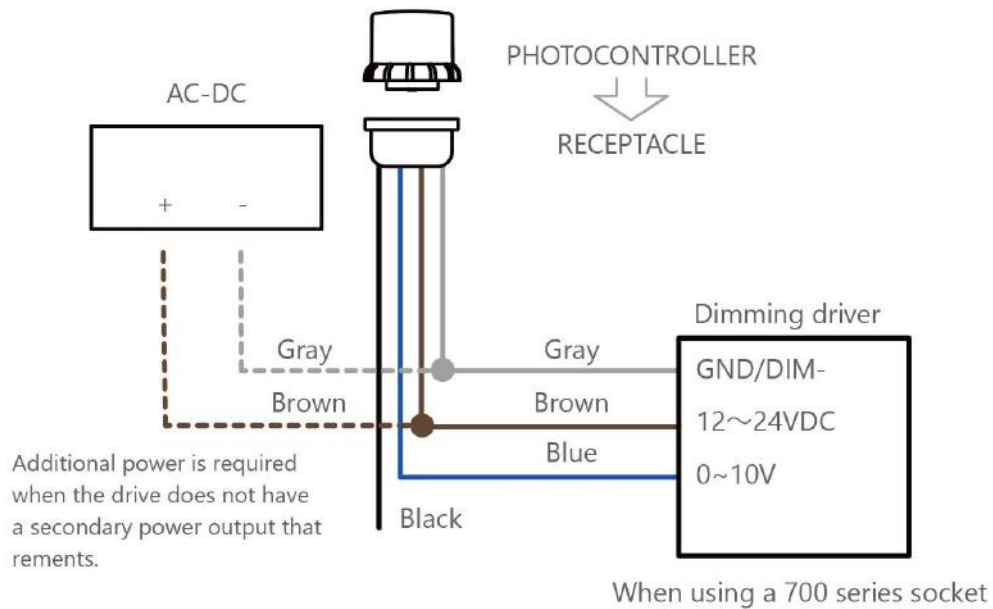
PIN

PIN	Definition	Type
-----	------------	------

1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	DIM+ (0~10V)	Dimming signal output
4	NC	-



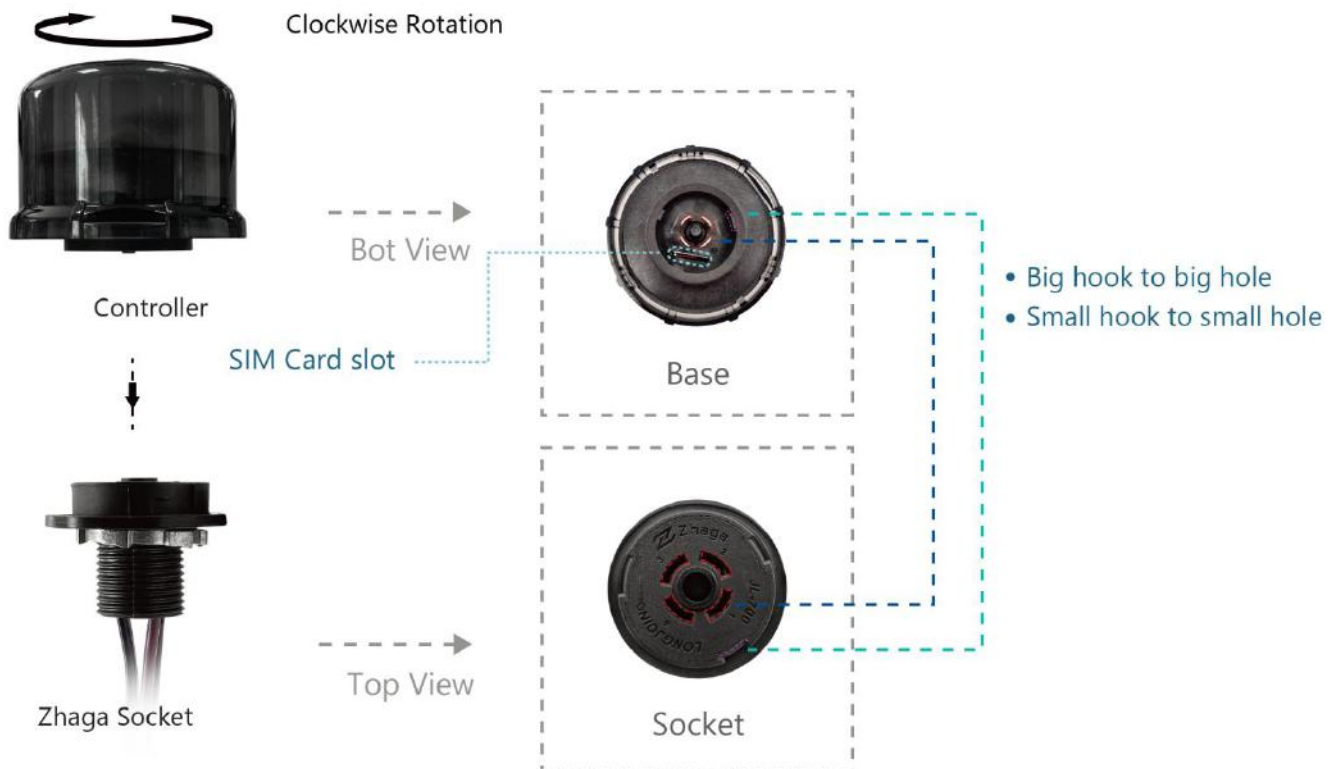
Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, Insert and tighten clockwise as shown in the figure below, and remove it counterclockwise.

The SIM card slot is located in the circular area at the bottom of the product. Refer to the image below.





Bottom Installation Diagram

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

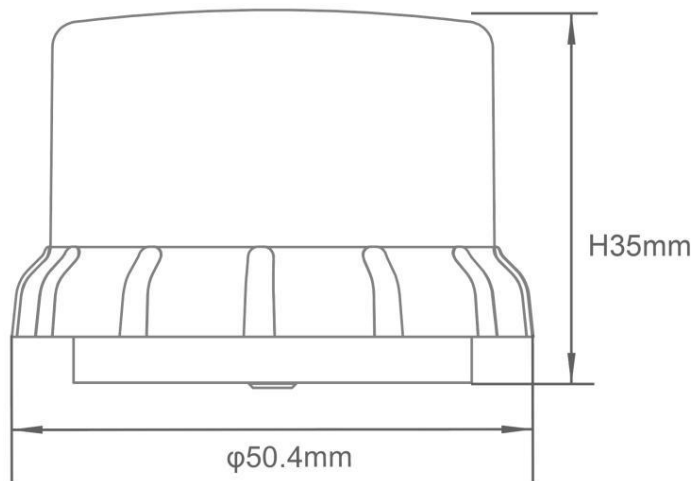
JL-719WB Zhaga Book-18 Zhaga Controller



Product Summary

JL-719WB is based on ZHAGA BOOK18 interface standard development of intelligent lock type light controller, can output 0~10V dimming signal, at the same time equipped with WIFI&Bluetooth communication network, can be controlled and configured through APP. The lamp controller is suitable for roads, lawns, courtyards, parks, parking lots, industrial mines and other lighting scenes.

Product size chart



Parameters

Model	JL-719WB
Power Supply	Rated voltage: 12~24VDC Rated current: 100mA
Power Consumption	< 1W

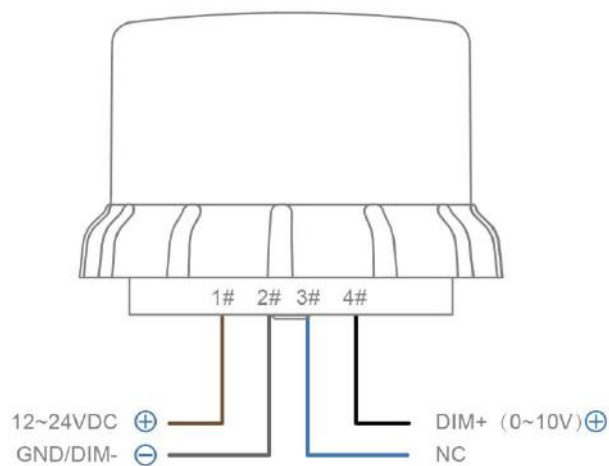
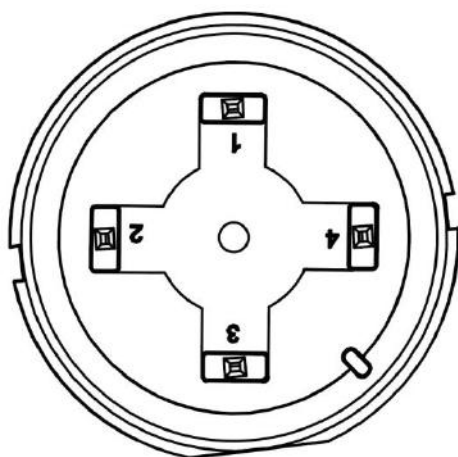
Communication	WIFI (802.11/g/b) +BLE (5.1)
Dimming interface	Type: 0~10V; Accuracy: $\pm 2\%$;
Energy saving strategy	Time and brightness can be set
Remote upgrade	Sustain OTA
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40°C~+70°C
Storage Temperature	-40°C~+85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66

Features

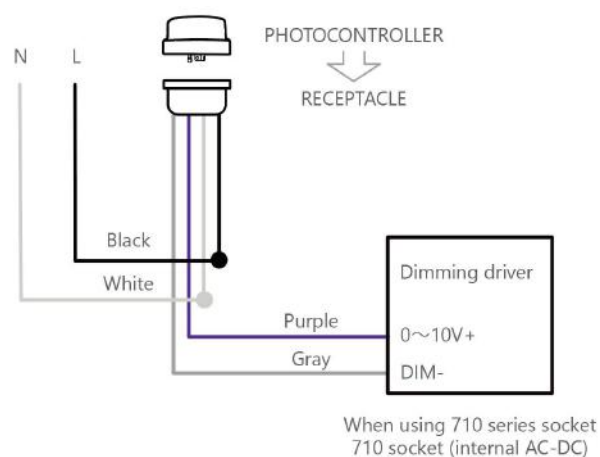
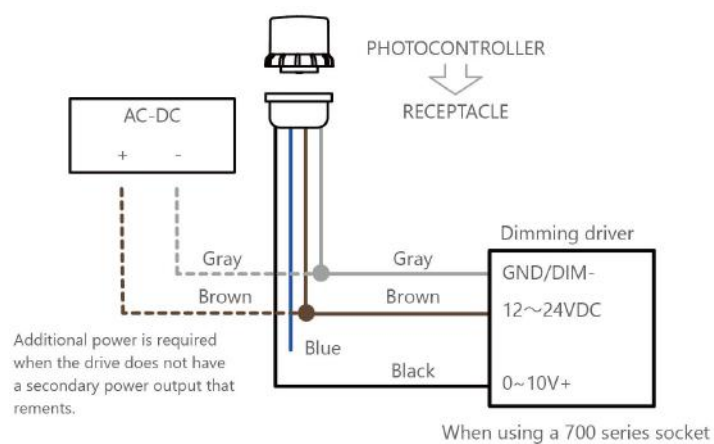
- 12 to 24 VDC power supply, low power consumption
- ZHAGA BOOK18 interface standard
- $\Phi 50.4 \times 35$ mm size, suitable for installation in most lamps
- 0~10V dimming interface
- Support WIFI&BLE dual-mode configuration and control
- Support third-party voice control, such as Alexa, Google Assistant, SmartThings, IFTTT, Xiaodu, Tencent Xiaowei, Dingdong, etc.
- IP66

PIN

PIN	Function	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	NC	NC
4	DIM+ (0~10V+)	Signal Output



Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Socket recommendation

Model	Type	Picture
JL-700	General	

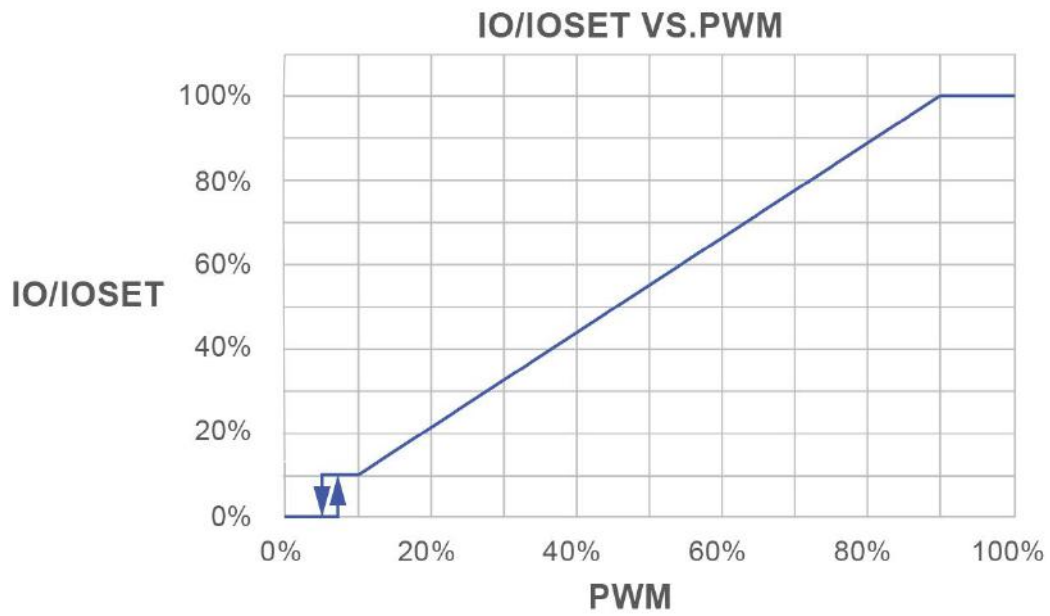
JL-700W	Without cable	
JL-700S	Short thread	
JL-700T	Pin	
JL-710	built-in 24VDC power supply	

APP application

Please view the special introduction document or video.

Attentions

- 1) If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.
- 2) Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



3) The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

JL-721A

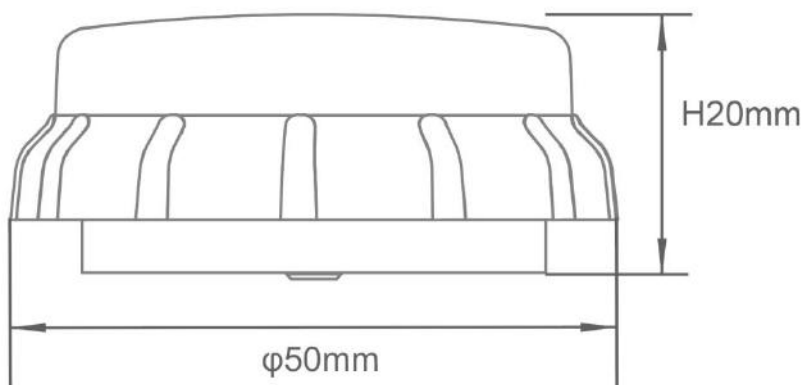
Zhaga Book-18 Receptacle



Product Summary

JL-721A series light controller products are intelligent rotary lock light controllers developed based on ZHAGA BOOK18 interface standard, which can output DALI2.0 dimming signals. All models have built-in photosensitive sensors. The light controller is suitable for lighting scenes such as roads, lawns, courtyards, and parks.

Product dimension drawing



Features

- DC power supply, low power consumption
- ZHAGA BOOK18 interface standard
- Small size, suitable for installation in most lamps

- DALI2.0 dimming interface
- Interference lighting filtering
- Lamp reflected light compensation
- IP66

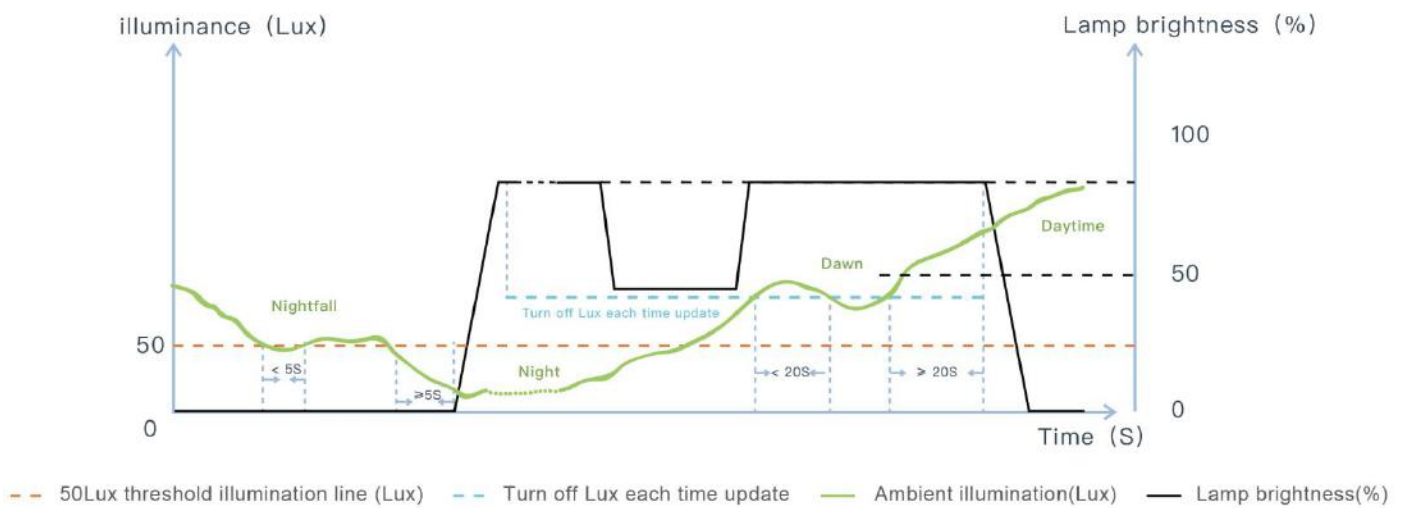
Specifications

Model	JL-721A1	JL-721A2
Power Supply	Rated voltage: 12~24VDC Rated current: 15mA	
Power Consumption	12V/10mA; 24V/11mA	
Sensor Type	Photosensitive tube	
Spectral Acquisition Range	350~1100nm, Peak wavelength 550nm	
Dimming interface	DALI2.0	
Turn on Illuminance	50Lux (±10)	
Turn off Illuminance	Reflected light + 40Lux (±10) after each turn on Lower limit: 50+40Lux (±10) Upper limit: 6000Lux (±100)	
Reflected light compensation upper limit	6000Lux (±100)	
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode ^{*1}	
Turn on delay	5S	
Turn off delay	20S	
0%~100%; 100%~0% Brightness change time	8S	
Midnight Dimming	NC	Trigger: the average center point of the first ten days

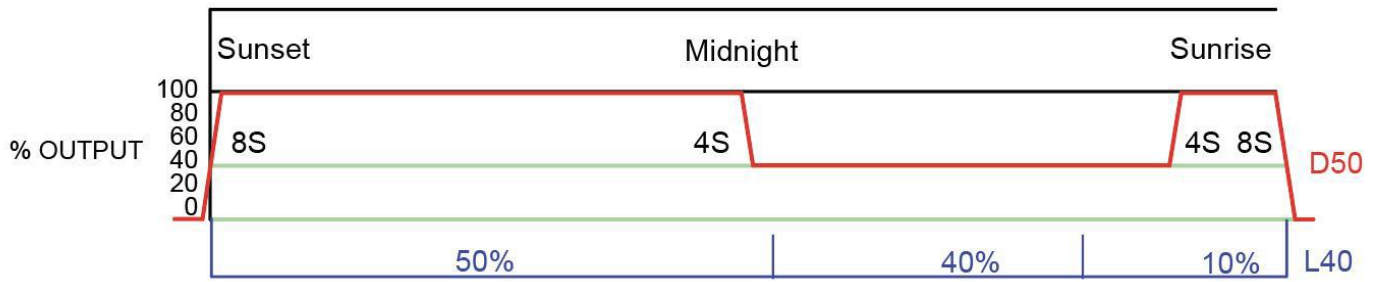
		(The first day default call night base is 10 hours) Dimming Ratio:50% Duration Ratio:40% Less than 10 days is calculated based on the actual number of days
Energy saving strategy	NC	Factory preset
Mechanical Vibration	IEC60068-2-6	
Flammability Level	UL94-V0	
Operating Temperature	-40°C~70°C	
Storage Temperature	-40°C~85°C	
Operating Humidity	5%RH~99%RH	
IP Level	IP66	
Certifications		

Note:

*1: Some of the old versions of the sample program turn off the light by default and maintain 5S after power-on, and then enter the self-sensing operation mode.



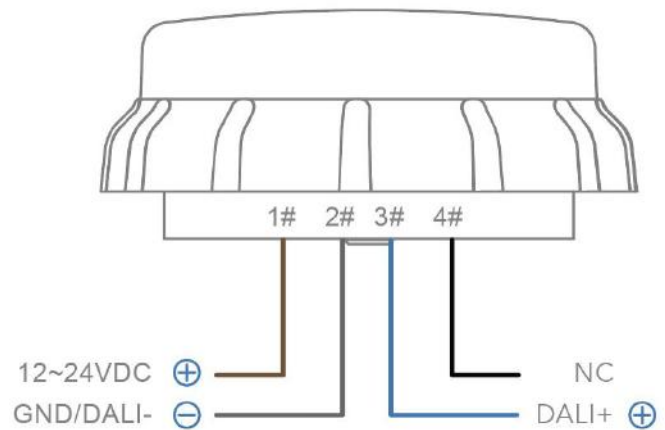
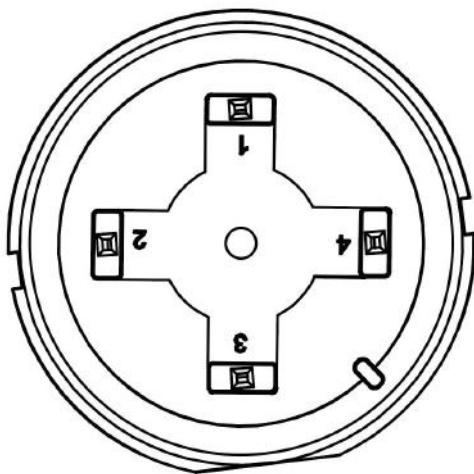
Ambient illumination and lamp brightness schematic diagram



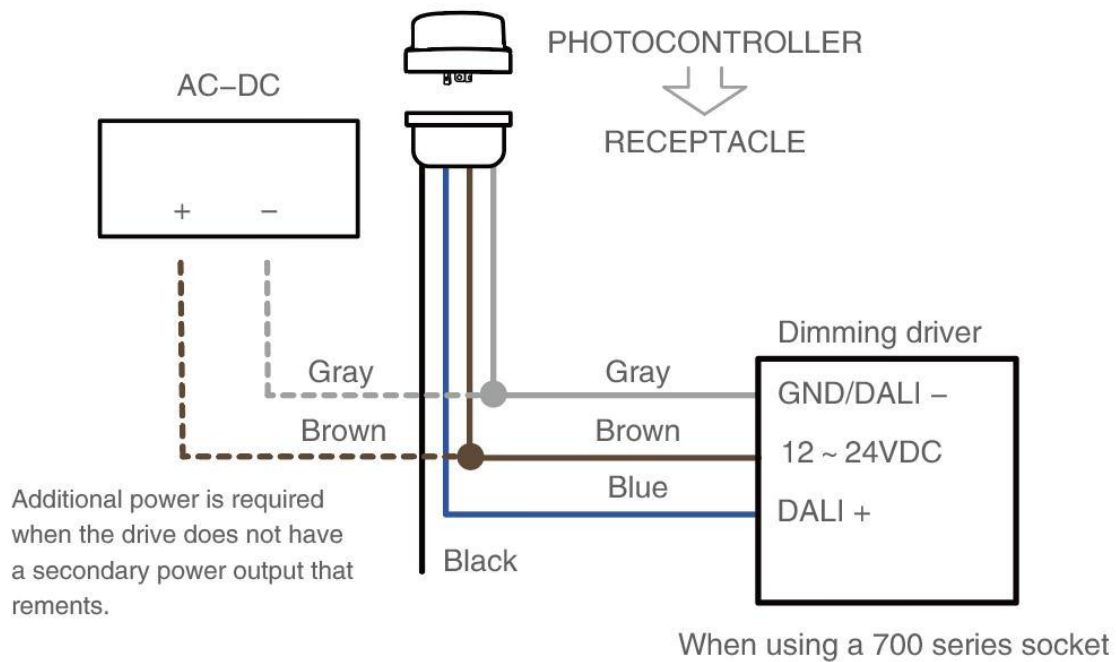
Midnight Dimming Schematic Diagram

PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DALI-	Power Input
3	DALI+	Signal Output
4	NC	NC

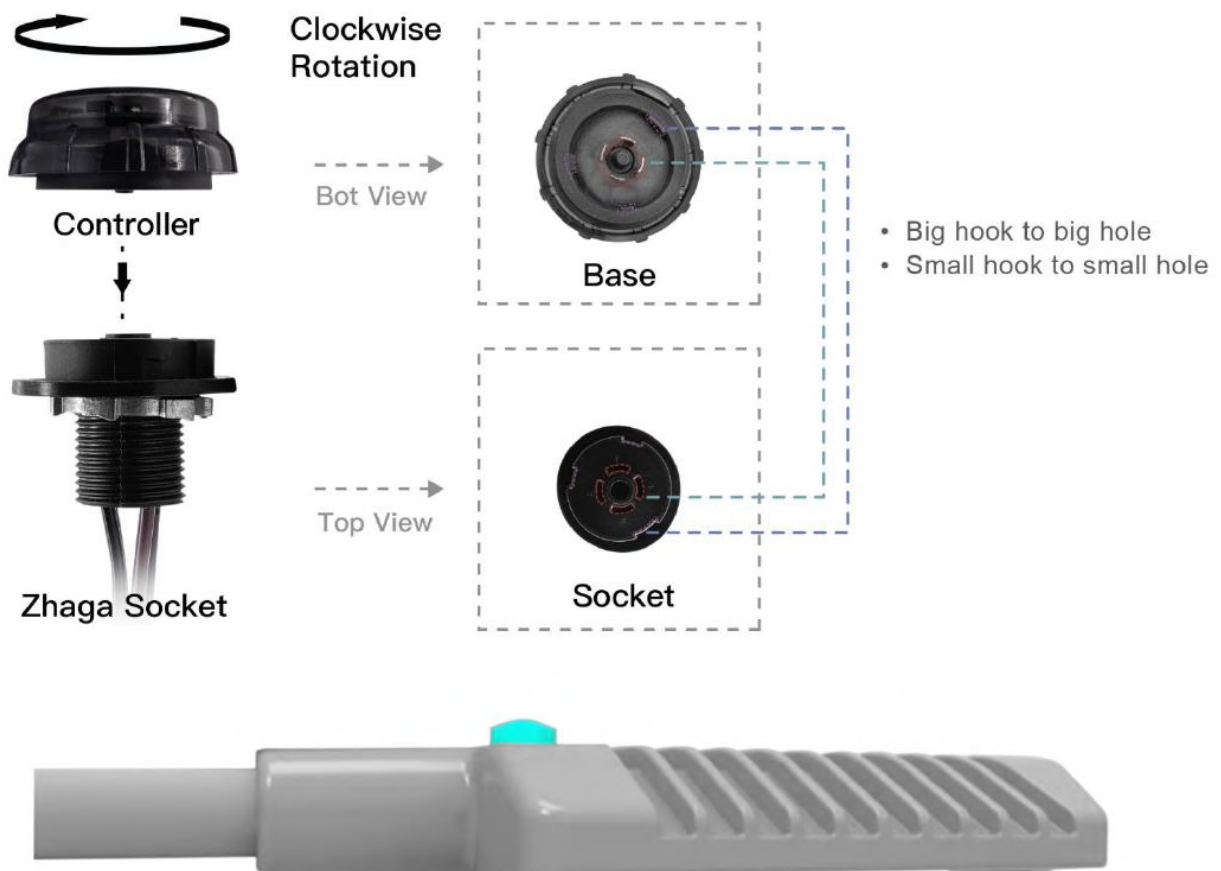


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Top installation diagram



Bottom installation diagram

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

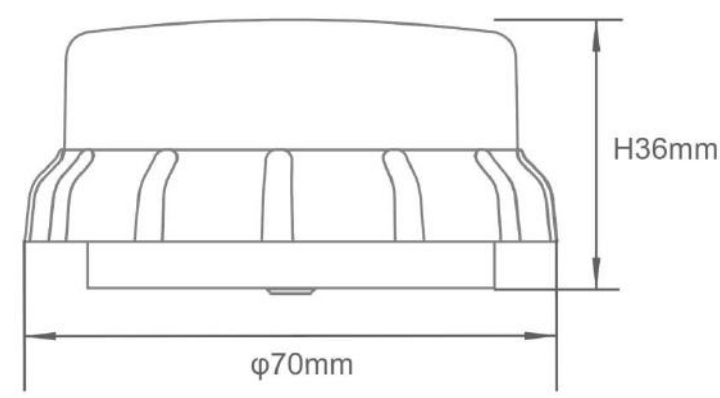
JL-721NP

Zhaga Book-18 Intelligent locking controller

Product Summary

JL-721NP series light controller products are intelligent rotary lock light controllers developed based on ZHAGA BOOK18 interface standard, It can be automatically dimmed by local ambient illuminance, or realized by NB-IOT remote real-time/strategy mode. The dimming mode supports DALI2.0 and supports GPS to automatically locate the geographic location of the device. The light controller is suitable for lighting scenes such as roads, Industry and mining , lawns, Parking lot , courtyards, and parks.

Product size chart



Parameters

Model No.	JL-721NP
Power Supply	Rated voltage: 12~24VDC, 5W
Communication mode	NB-IoT
Spectral Acquisition Range	350~1100nm, Peak wavelength550nm

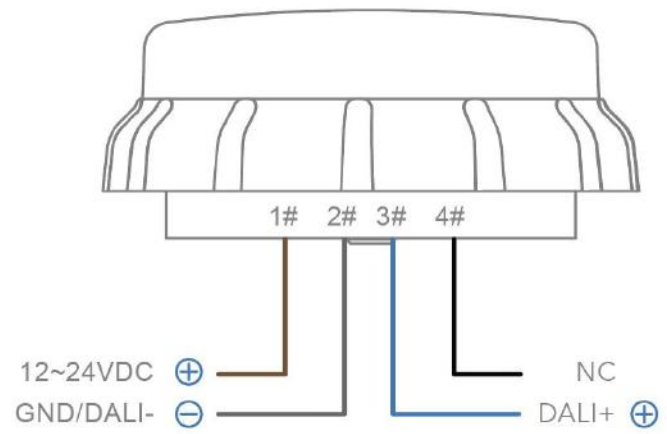
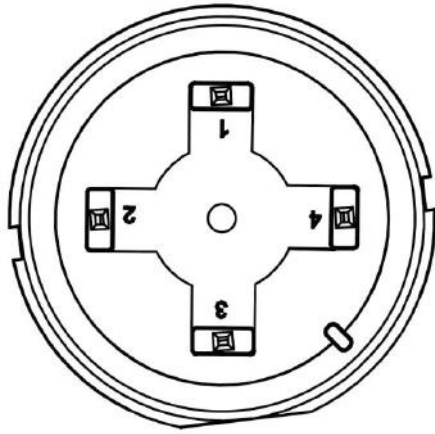
Ambient light acquisition	Range: 0.01~64000Lux Accuracy: $\pm 2\%$
Turn on Illuminance	100Lux (± 10)
Turn off Illuminance	Reflected light +40Lux (± 10) Lower limit: 50+40Lux (± 10) Upper limit: 6000Lux (± 100)
Reflected light compensation upper limit	6000Lux (± 100)
Dimming interface	DALI2.0
Default maximum power ratio	80%
NB-IOT	Frequency band: B1/B3/B5/B8/B20 (customizable) Transmitting power: 23dBm ± 2 dB Receiving sensitivity: -129dBm
Network Protocol	MQTT
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode *1
Blue LED Indicator Light	Blinking: Connecting to the server Always on: Successfully connected to the server
Default periodic reporting frequency	10 minute
Turn on delay	10S
Turn off delay	10S
Energy saving strategy	Custom
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0

Operating Temperature	-40°C~70°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	Zhaga-D4i、CE、ROHS

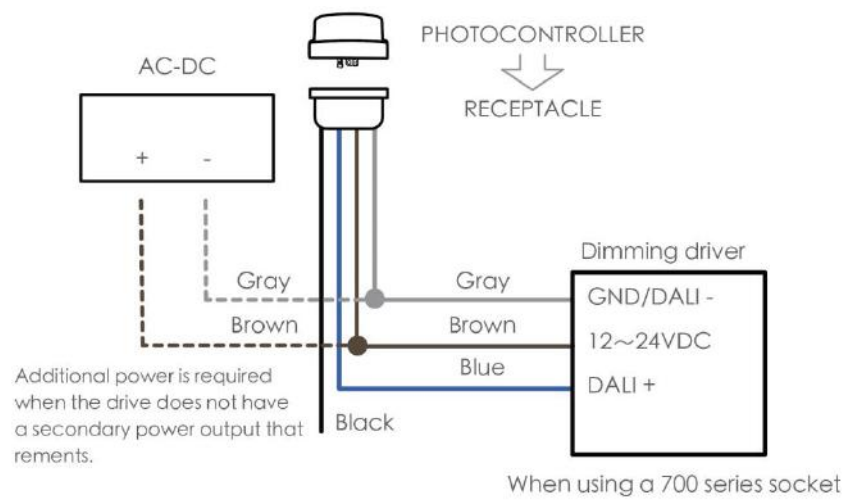
Features

- DC power supply, low power consumption
- ZHAGA BOOK18 interface standard
- Support NB-IOT communication mode, multi-band B1/B3/B5/B8/B20, support most countries/regions in the world
- Support GPS positioning
- MQTT network protocol, data encryption
- 0.01~64000Lux ultra-wide ambient illumination collection range
- When the wireless signal is abnormal, it will automatically switch to the local light sensing mode
- DALI2.0 dimming interface
- Small size, suitable for installation in most lamps
- Interference lighting filtering
- Lamp reflected light compensation
- Support DFOTA remote software upgrade
- Undervoltage alarm report
- RTC
- External NANO SIM card
- IP66

Light Controller Pin Definition



Wiring Diagram



JL-722A2H Zhaga Book-18 Zhaga Controller



Product Summary

The JL-722A2H light controller product is a smart latch type light controller developed based on the Zhaga Book-18 interface standard. It uses a combination of light sensing and microwave sensing sensors, can output DALI dimming signals, and supports infrared remote control for parameter configuration. This light controller is suitable for lighting scenarios such as roads, lawns, courtyards, parks, parking lots, factories, warehouses, etc.

The working logic of the product is that when the illumination is met, the lamp works at a slightly bright brightness and starts a countdown of the slightly bright duration. At this time, if a moving object is detected, the lamp becomes fully bright. When a moving object is detected and left, a countdown of the fully bright duration begins. After the countdown of the fully bright duration ends, it returns to the slightly bright brightness and starts a countdown of the slightly bright duration. When the countdown of the slightly bright duration ends or the illumination is met, the lamp is turned off.

Features

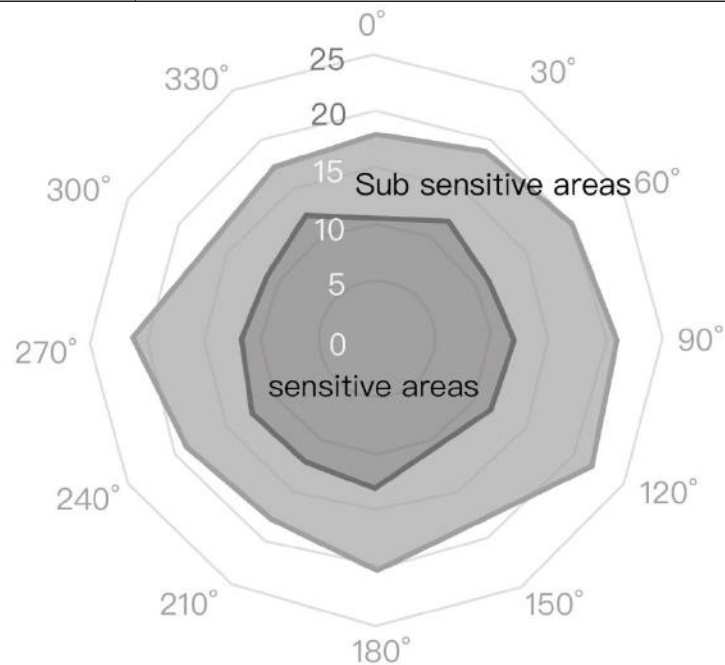
- 12-24VDC auxiliary source or DALI bus power supply, low power consumption
- Zhaga Book-18 interface standard
- DALI2.0
- Dynamic adjustment of microwave frequency to avoid mutual interference during dense installation
- Φ 50.4 * 35mm compact size, suitable for installation on various lighting fixtures

- Light sensitivity+microwave, on-demand lighting, more energy-efficient
- Visible light filtered photosensitive sensor
- High performance microwave, with a hanging height of 15 meters and an induction radius of ≥ 10 meters
- Infrared remote control
- IP66

Parameters

Power supply	AUX Power: Voltage: 12~24VDC Current: 12V/35mA; 24V/25mA DALI Bus powered: current: 30mA
Power dissipation	< 0.385W (12V) ; < 0.55W (24V) The AUX or DALI bus supply power.
Dimming	DALI
Sensors	Light sensitivity+microwave
Spectral range	wavelength: 800~1100nm
Microwave frequency	5.8GHz
Maximum hanging height	15 meters
Induction radius	≥ 10 meters
Start-up time	< 200mS
Power on initialization	By default, it remains turn on for 5s (gradient) when powered on, and then runs properly based on parameter Settings and environment conditions
Sensitivity	Default 80%, adjust through IR
Hold time	Default 30S, adjust through IR
Stand-by dim level	Default 0%, adjust through IR
Stand-by period	Default infinite, adjust through IR
Turn on Illuminance	Default 50lux, adjust through IR
Turn off illuminance Δ value	Default Δ 50lux, adjust through IR
Turn off illuminance	Turn on Illuminance + Turn off illuminance Δ value

Maximum power ratio	Factory default 100%, adjust through IR
Off → Stand-by dim time	Depending on the drive's fade time parameter, the default is 0S
Stand-by dim → 100% dim time	
100% dim → Stand-by dim time	
Stand-by dim → turn off time	
mechanical vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40 °C~70 °C
Storage Temperature	-40 °C~85 °C
Operating Humidity	5% RH~99% RH
IP Level	IP66
Certifications	CE、ZHAGA、D4i、DALI2.0、ROHS



Microwave induction schematic diagram - installation at a height of 15 meters

Infrared remote controller



Icon	Function	Default value	Adjustable range or function definition
	Sensitivity	80%	10%/20%/30%/40%/50%/60%/70%/80%/90%/100%/FF, FF equivalent to continuously triggered by induction
	Hold time	30S	5S/30S/1M/3M/5M/10M/20M/30M
	Stand-by dim level	0%	0%/10%/20%/30%/40%/50%
	Stand-by period	FF	5S/30S/1M/3M/5M/10M/20M/30M/FF, FF is equivalent to infinity
	Turn on Illuminance	50Lux	2/10/20/30/50/80/100/150/200/250/300/350/400/FF, FF is equivalent to any illuminance that meets the turn on Illuminance
	Turn on Illuminance Δ value	50Lux	50/100/200/300
	Maximum power ratio	100%	50%/60%/70%/80%/90%/100%
	Unlock button		Other buttons must be unlocked before they can be used. When no buttons are operated after 60 seconds, licking the configuration send button and long pressing the configuration erase button, the buttons will be locked again.
	Configuration send button		Send all configuration parameters displayed on the screen and lock the button again.

	Configuration erase button		Long press and hold for 3 seconds to erase all the parameters configured through the infrared remote control, restoring it to the factory default values (The device can be restored to factory Settings after being powered on or off for six consecutive times). After sending, the buttons will be locked again.
	Turn on/off button		To switch the on/off status of the lighting, need to press the  button or power on again to exit the on/off status.
	Apply mode switch button		Switch the lamps to automatic operation mode.
	Parameter select button		Select different parameter types.
	Parameter value select button		Select different parameter values for the currently selected parameter type.

Note: The infrared remote control controls a distance of about 20 meters, an angle of about $\pm 45^\circ$, and the display screen has backlight function.

General operating instructions:

⑧ Press  button, Seeing parameters flashing on the remote control display screen.

⑨ Press  button, Select the parameter item to be adjusted, and the flashing parameter item is the currently selected parameter item.

- ⑩ Press  button, Select specific parameter values for the selected parameter item.
- ⑪ Press  button, Send all parameter values on the display screen.
- ⑫ Press  button forced on/off lights.
- ⑬ Press  button, switch to automatic operation mode.
- ⑭ Press  button, erase the configured parameters and restore them to the factory default values.

Function examples

- Turn on Illuminance: FF, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off whole day if no motion Turn on whole day if motion Hold time count down Turn off after hold time

- Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Turn off after hold time

- Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 20%, Hold time: 30S, Stand-by period: 1M



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Stand-by period count down after hold time



Turn off after stand-by period

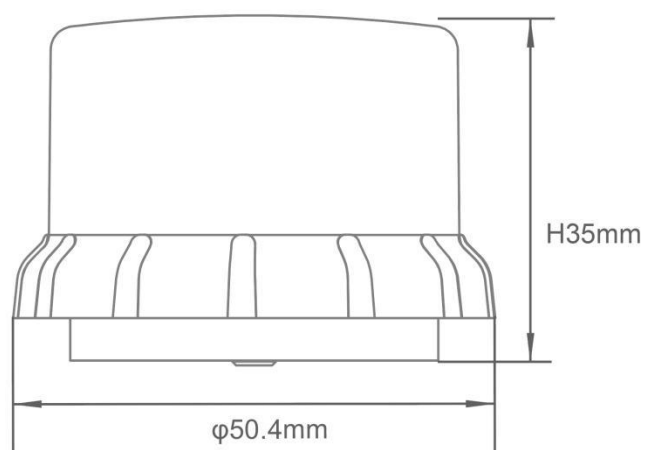
➤ Turn on Illuminance: 50Lux, Sensitivity: FF



Turn off daytime

Turn on night either motion or no motion

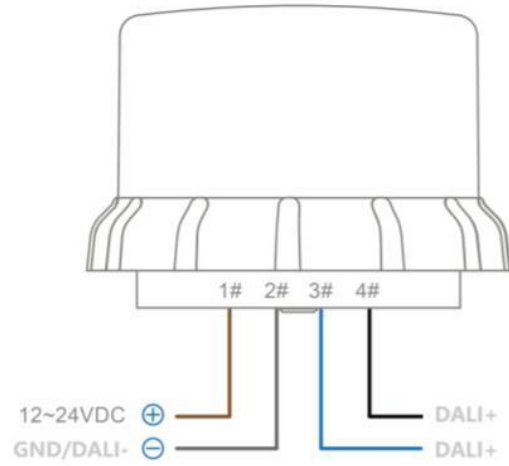
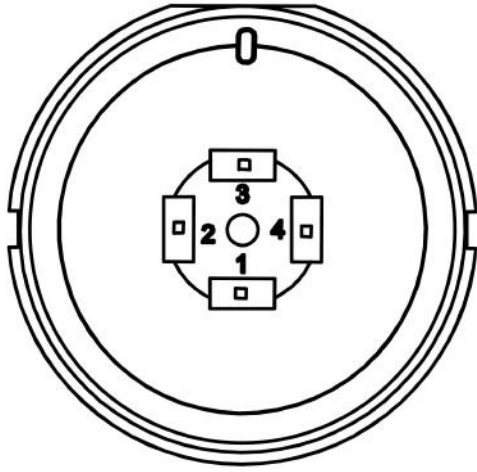
Dimension



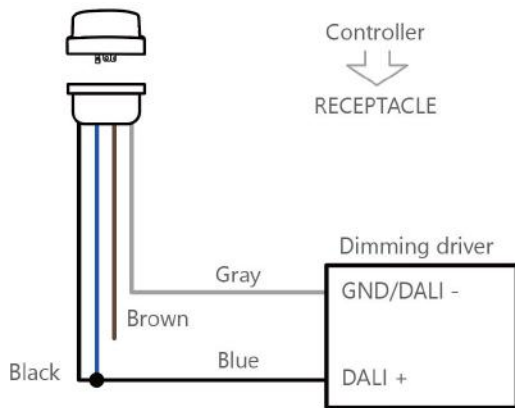
Pin

Pin number	Pin Definition	Types of
1	12~24VDC	Power input
2	GND/DALI-	Power input
3	DALI+	Signal output
4	DALI+	Signal output

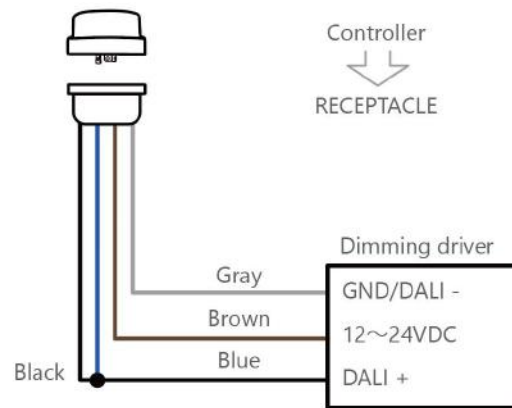
Note: Both # 3 and # 4 output dimming positive electrodes at the same time. When wiring the socket, either one of them can be connected to the driver or both can be connected simultaneously. If not connected, it is recommended to use insulation wrapping treatment



Wiring diagram



Wiring scheme 1: The driver meets DALI PART250



Wiring scheme 2: Driver does not meet DALI PART250

Note: Either the black or blue line can be selected, and it can also be connected in parallel at the same time.

Install

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



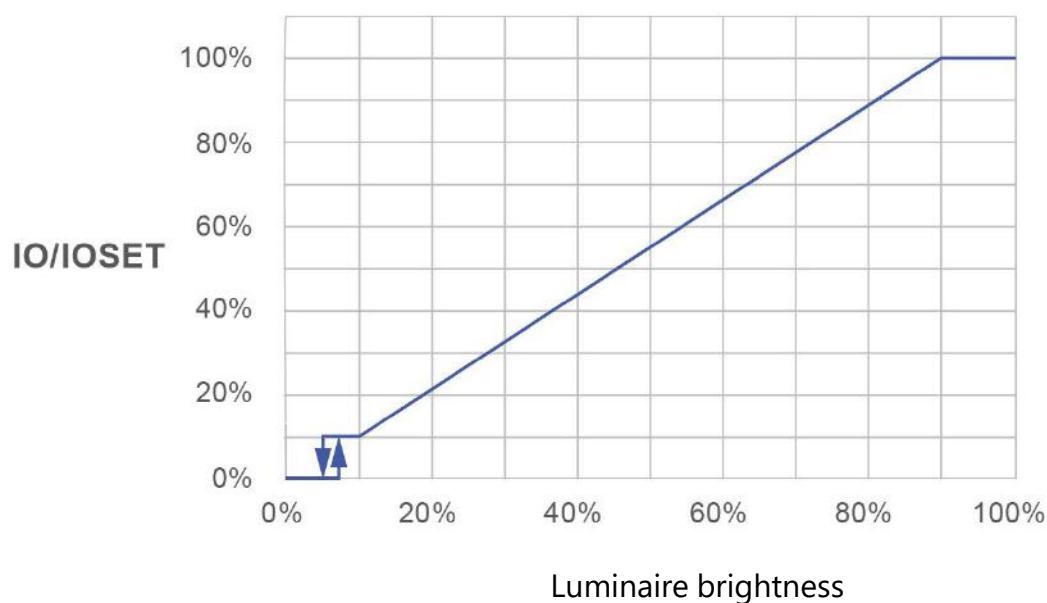
Recommended socket selection

Model	Feature	Picture
JL-700	Normal	
JL-700W	Self plugging	

JL-700S	Short threaded	
JL-700T	Probe	
JL-710	AC power	

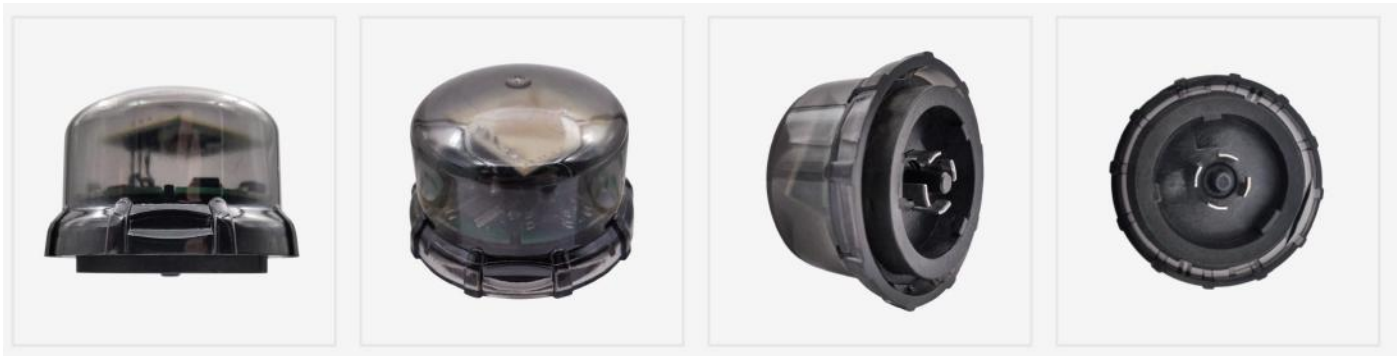
Precautions

1. If the negative pole of the auxiliary power supply of the driver is separate from the negative pole of the dimming interface, they need to be short circuited and connected to the light controller # 2.
2. This product is mainly used for LED lamps, tungsten filament lamps and other lamps with a wide spectrum may turn off again after turning on the light.
3. Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



4. The light controller only outputs a dimming signal to the driver, regardless of the power load of the driver and light source.
5. When testing, do not use your fingers to block the photosensitive window, as the gaps between your fingers may pass through and cause the light to fail to turn on.
6. After power on initialization, if the lighting illumination and motion trigger conditions have been met, the light will be directly turned on to 100%, and it is not mandatory to enter stand-by dim level first.
7. There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.
8. If used in outdoor scenes, rain and swaying trees may turn on the light by mistake.
9. Avoid hanging installation to prevent the product from shaking and turn on the light by mistake.
10. The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.
11. Infrared remote controls are easily affected by sunlight, so when used outdoors during the day, the remote control distance and other performance may be reduced.
12. The microwave preheating time is 5 seconds, which means that the motion detection signal can only be triggered after the microwave module is powered on for 5 seconds.
13. The controller only send the dimming target value, and the specific dimming gradient duration depends on the driver's fade time, which generally defaults to 0, that is, the dimming is transient and has no gradient process. Customers can set the value according to their own preferences, but it is recommended not to be too long, so as to avoid the induction lighting process is too slow.

JL-722A3 Zhaga Book-18 Zhaga Controller

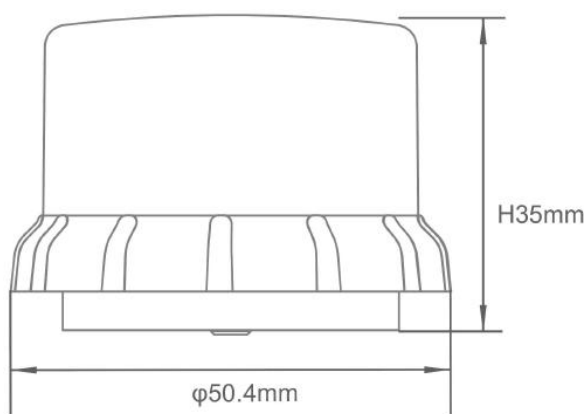


Product Summary

JL-722A3 light controller products are intelligent rotary lock light controllers developed based on ZHAGA BOOK18 interface standard. It adopts light sensing and microwave mobile combined sensor, which can output DALI2.0 dimming signal.

The light controller is suitable for lighting scenes such as roads, lawns, courtyards, parks, car park and construction site.

Product size chart



Parameters

Model	JL-722A3
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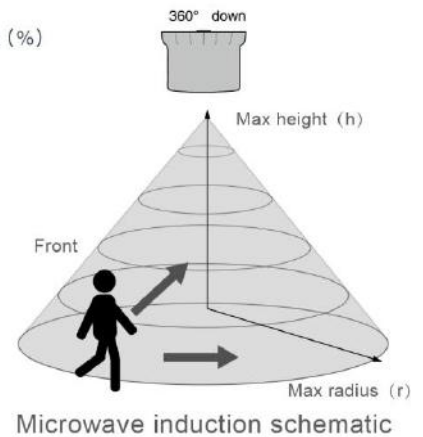
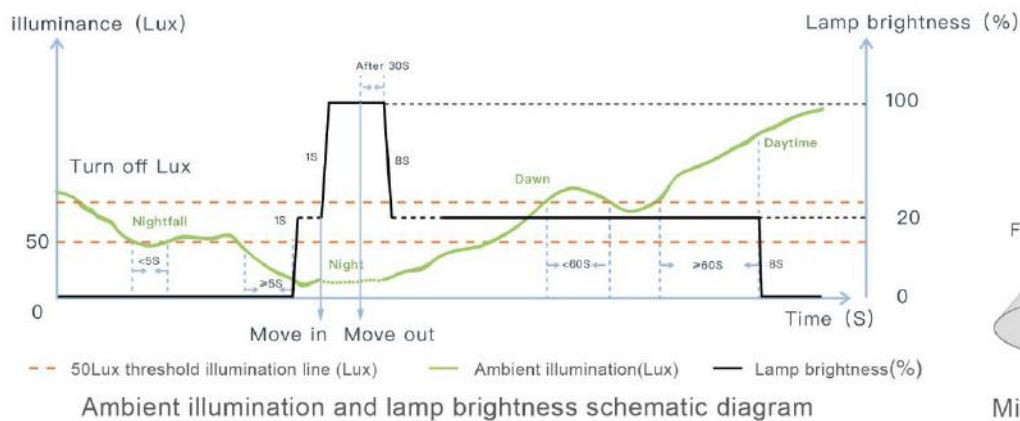
Power Supply	Rated voltage: 12~24VDC Rated current: 12V/45mA; 24V/30mA
Power Consumption	12V/3.5mA; 24V/3.5mA
Dimming	DALI2.0
Spectral Acquisition Range	350~1100nm, Peak wavelength 550nm
Turn on Illuminance	50Lux (±10)
Turn off Illuminance	Reflected light + 40Lux (±10) after each turn on Lower limit: 50+40Lux (±10) ; Upper limit: 6000Lux (±100)
Reflected light compensation upper limit	6000Lux (±100)
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode ^{*1}
Turn on delay	5S
Turn off delay	60S
0%~20%; 20%~100% Brightness change time	1S
100%~20%; X%~0% Brightness change time	8S
100% brightness hold time after microwave trigger	30s
Stand-by Dimming	20%
Maximum hanging height of microwave	15M
Sensing radius	4-8M (by 15m hanging height)
Microwave induction angle	92°
Microwave anti-false trigger	Can prevent wind, rain, leaves, and small animals
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40°C~70°C

Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	  

Note:

*1:

- a). If the light-emitting surface of the lamp is completely shielded and isolated from the light-sensitive surface of the light controller when installed, that is, no reflected light enters the light controller after the lamp is illuminated, then the light-off illuminance at this time is equal to the lower limit, that is, down The illuminance of the second turn off is approximately = the default turn on illuminance + 40 lux compensation value = 50 + 40 = 90 lux;
- b). If the installation fails to completely shield and isolate the light-emitting surface of the lamp and the light-sensitive surface of the light controller, that is, the reflected light enters the light controller after the lamp is illuminated. If the lamp is lit to 100%, the current environment collected by the light controller If the illuminance is 500lux, the illuminance of the next turn off is approximately = the current ambient illuminance+40=540lux;
- c). If the power of the lamp is high and the light-emitting surface is very close to the light-sensitive surface of the light controller, the reflected light exceeds the upper limit of compensation after the lamp is turned on to 100%, that is, the light controller detects that the ambient illuminance has been stable after turning on the light If it is greater than 6000lux, the light controller will automatically turn off the light after 60S.

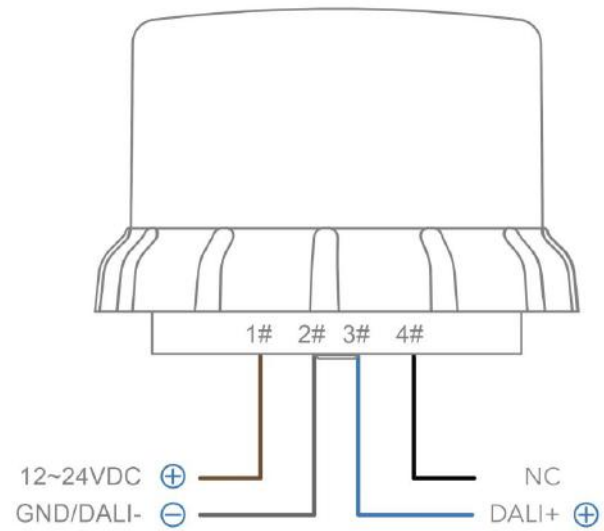
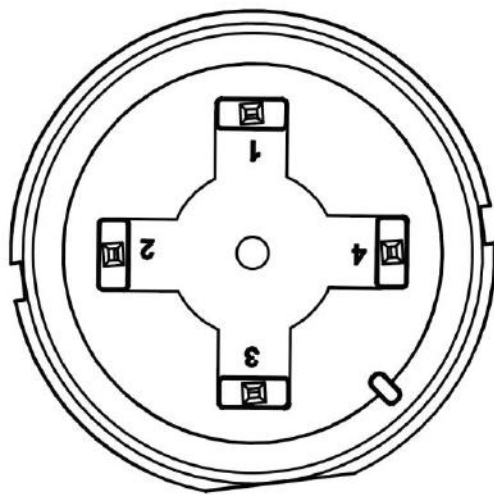


Features

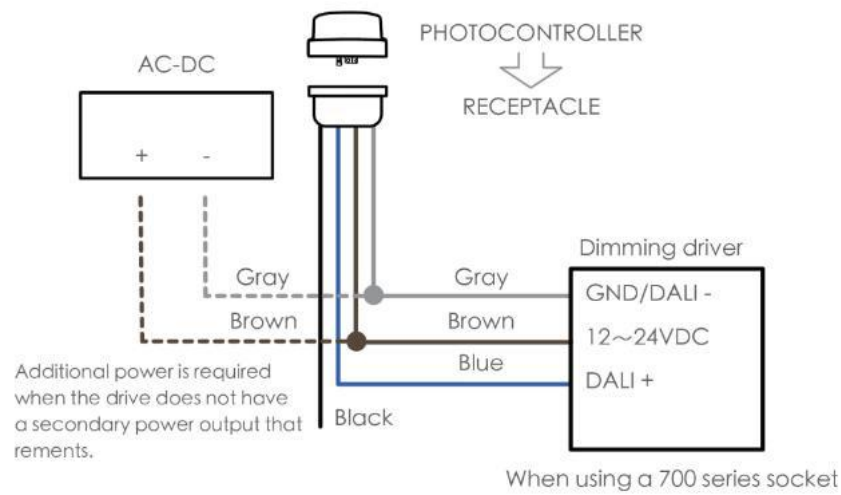
- light sense + microwave, lighting on demand, more humanized and power saving
- microwave anti false triggering, indoor and outdoor
- automatic dynamic microwave frequency adjustment to avoid mutual interference in dense installation
- comply with zhaga book18 interface standard
- DC power supply, ultra low power consumption
- support DALI2.0 dimming mode
- compact size, suitable for installation to various lamps
- anti false triggering design of interference light source
- reflected light compensation design of lamps
- waterproof protection grade up to IP66

PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DALI-	Power Input
3	DALI+	Signal Output
4	NC	Signal Output

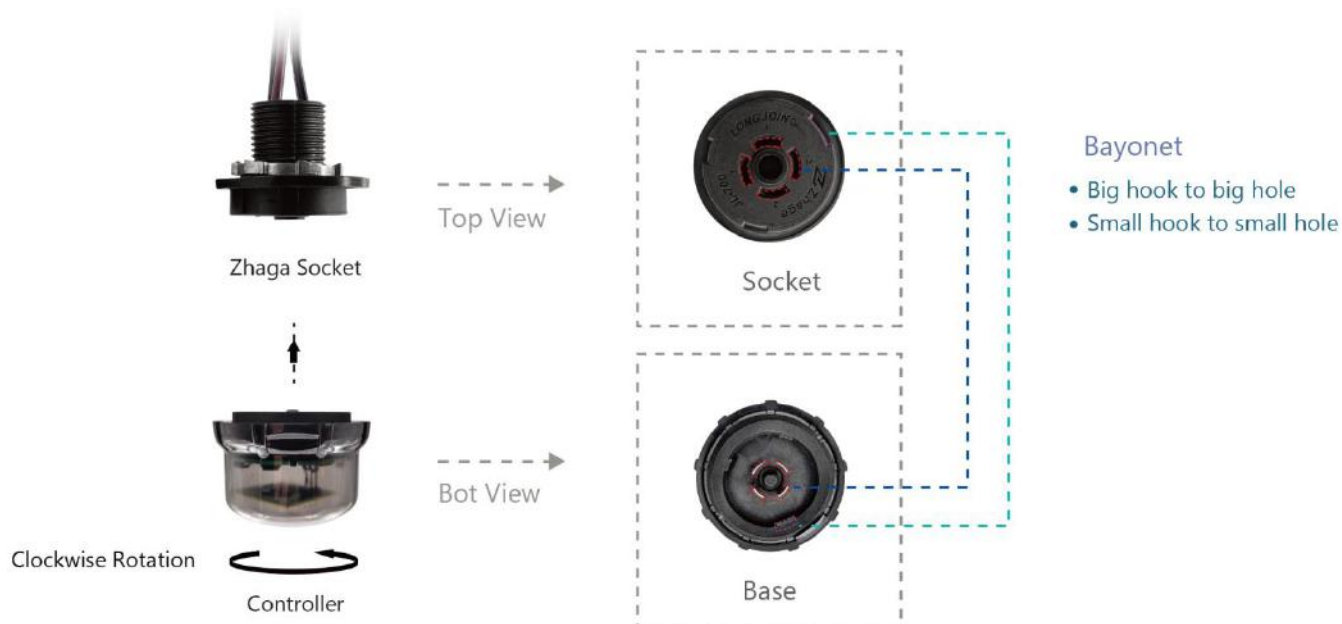


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.

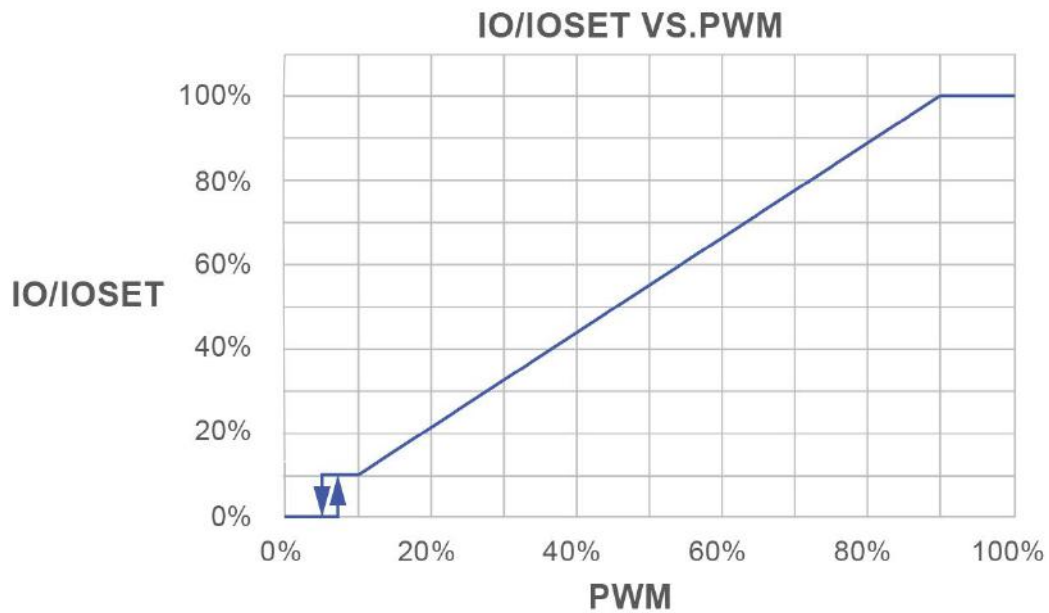


Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

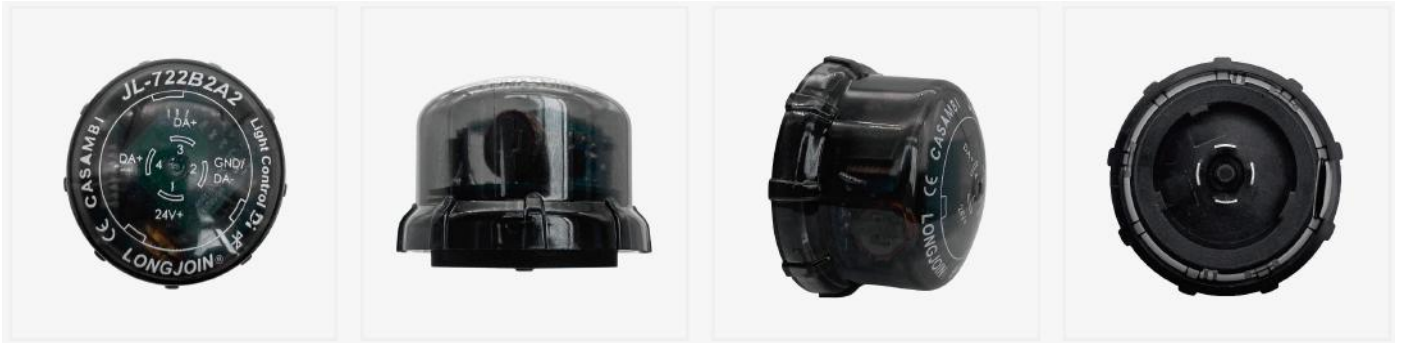
Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

JL-722B2A2 Zhaga Book-18 Zhaga Controller



Product Summary

The JL-722B2A2 light controller product is a smart latch type light controller developed based on the Zhaga Book-18 interface standard. It uses a combination of light sensing and microwave sensing sensors, can output DALI dimming signals, and support Casambi Bluetooth mesh communication network. It can be controlled by Bluetooth near field, or be controlled remotely by Bluetooth gateway. You can configure parameters and scenarios using the Casambi APP . This light controller is suitable for lighting scenarios such as roads, lawns, courtyards, parks, parking lots, factories, warehouses, etc.

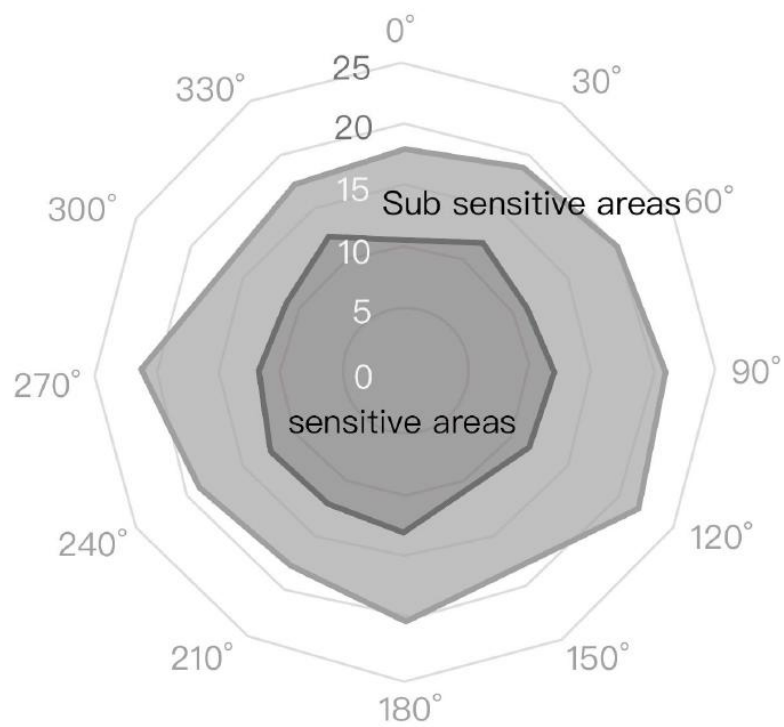
Features

- 12-24VDC auxiliary source or DALI bus power supply, low power consumption
- Zhaga Book-18 interface standard
- DALI dimming mode
- Dynamic adjustment of microwave frequency to avoid mutual interference during dense installation
- Φ 50.4 * 35mm compact size, suitable for installation on various lighting fixtures
- Light sensitivity+microwave, on-demand lighting, more energy-efficient
- Visible light filtered photosensitive sensor

- High performance microwave, with a hanging height of 15 meters and an induction radius of ≥ 10 meters
- CASAMBI BLE MESH
- IP66

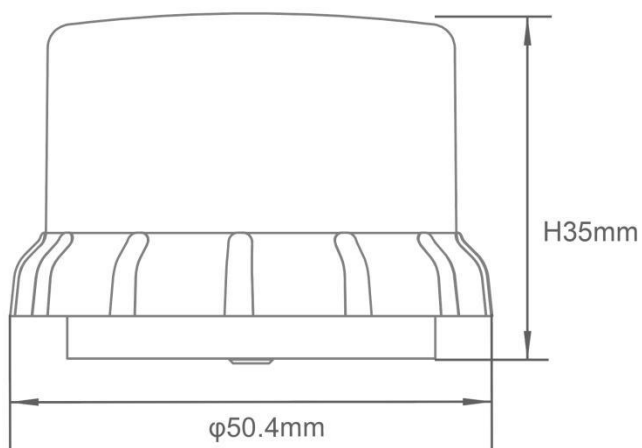
Parameters

Power supply	AUX Power: Voltage: 12~24VDC Current: 12V/35mA; 24V/25mA DALI Bus powered: current: 30mA
Power dissipation	< 0.385W (12V) ; < 0.55W (24V)
Dimming	DALI
Sensors	Light sensitivity+microwave
Spectral range	800~1100nm
Microwave frequency	5.8GHz
Maximum hanging height	15 meters
Induction radius	≥ 10 meters
Start-up time	< 200mS
Sensitivity	Default 80%, adjust through APP
Scene	Custom scenes can be created and edited through the APP
mechanical vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40 °C~70 °C
Storage Temperature	-40 °C~85 °C
Operating Humidity	5% RH~99% RH
IP Level	IP66
Certifications	CE、ZHAGA、D4i、DALI2.0、ROHS



Microwave induction schematic diagram - installation at a height of 15 meters

Dimension

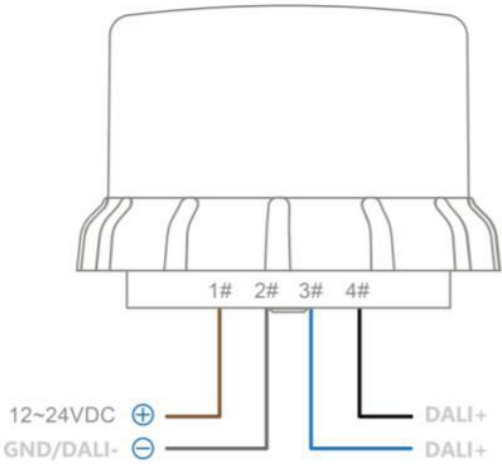
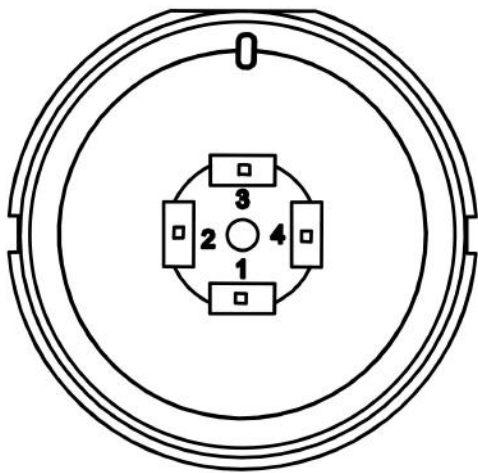


Pin

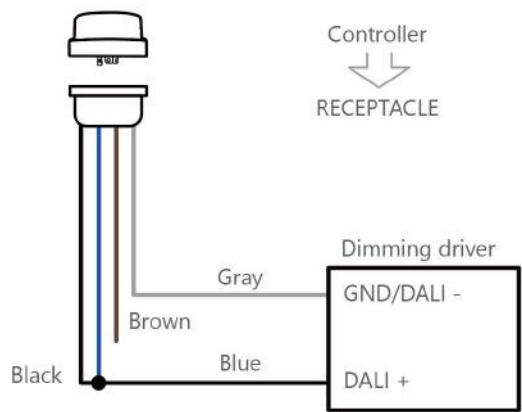
Pin number	Pin Definition	Types of
1	12~24VDC	Power input

2	GND/DIM-	Power input
3	DIM+ (DALI+)	Signal output
4	DIM+ (DALI+)	Signal output

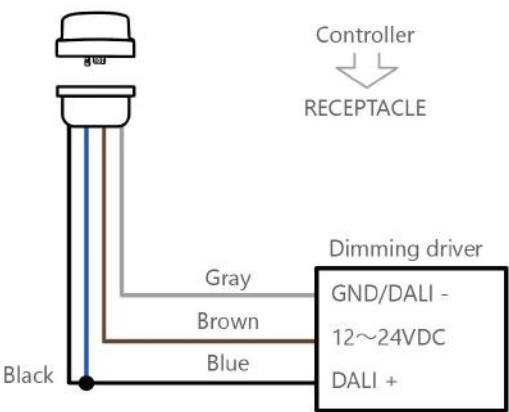
Note: Both # 3 and # 4 output dimming positive electrodes at the same time. When wiring the socket, either one of them can be connected to the driver or both can be connected simultaneously. If not connected, it is recommended to use insulation wrapping treatment



Wiring diagram



Wiring scheme 1: The driver meets DALI PART250



Wiring scheme 2: Driver does not meet DALI PART250

Note: Either the black or blue line can be selected, and it can also be connected in parallel at the same time.

Install

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



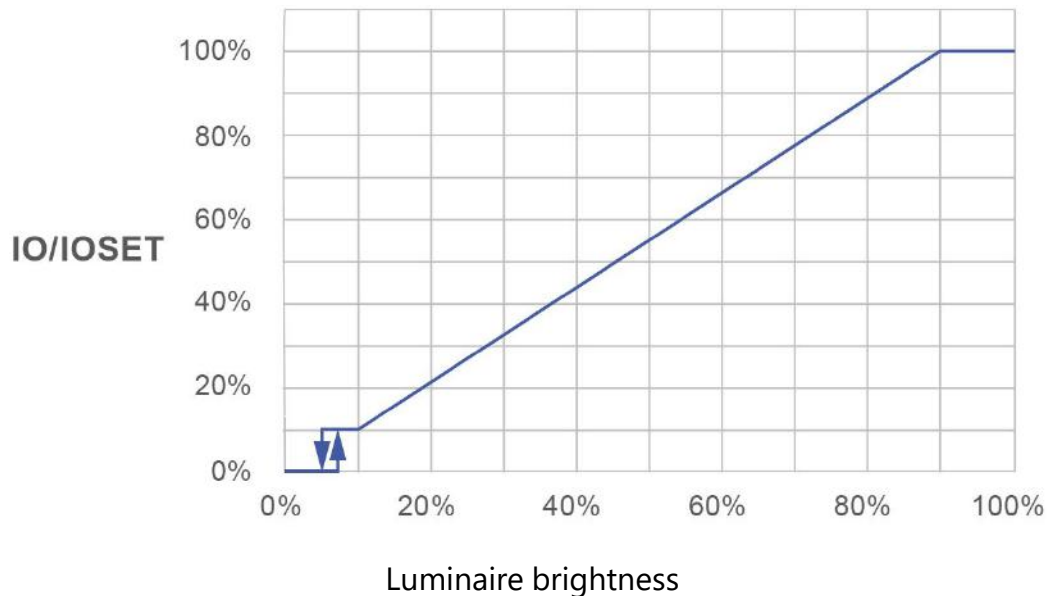
Recommended socket selection

Model	Feature	Picture
JL-700	Normal	
JL-700W	Self plugging	
JL-700S	Short threaded	
JL-700T	Probe	
JL-710	AC power	

Precautions

1. If the negative pole of the auxiliary power supply of the driver is separate from the negative pole of the dimming interface, they need to be short circuited and connected to the light controller # 2.

2. This product is mainly used for LED lamps, tungsten filament lamps and other lamps with a wide spectrum may turn off again after turning on the light.
3. Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



4. The light controller only outputs a dimming signal to the driver, regardless of the power load of the driver and light source.
5. When testing, do not use your fingers to block the photosensitive window, as the gaps between your fingers may pass through and cause the light to fail to turn on.
6. There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.
7. If used in outdoor scenes, rain and swaying trees may turn on the light by mistake.
8. Avoid hanging installation to prevent the product from shaking and turn on the light by mistake.
9. The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.
10. The microwave preheating time is 5 seconds max, which means that the motion detection signal can only be triggered after the microwave module is powered on for 5 seconds max.

JL-722B2B2 Zhaga Book-18 Controller



Product Summary

JL-722B2B2 light controller is a smart light controller developed based on ZHAGA BOOK18 interface standard. It adopts a combination sensor of light sensing and microwave sensing, DALI2.0 dimming signal, supports dual-mode configuration of dip switch and infrared remote control, and is equipped with Casambi Bluetooth mesh communication network. It can be controlled and configured by APP near field, and can also be configured remotely with Bluetooth gateway. The light controller is suitable for road, lawn, yard, park, parking lot, factory, warehouse and other lighting scenes.

The working logic of the product is that when the illumination level is met to turn on, the lamp operates at a slightly bright. If a moving object is detected at this time, the lamp becomes fully bright, and after the full bright duration is completed, it returns to a slightly bright. When stand-by period is over or the illumination level is met to turn off, the lamp will be turned off.

Features

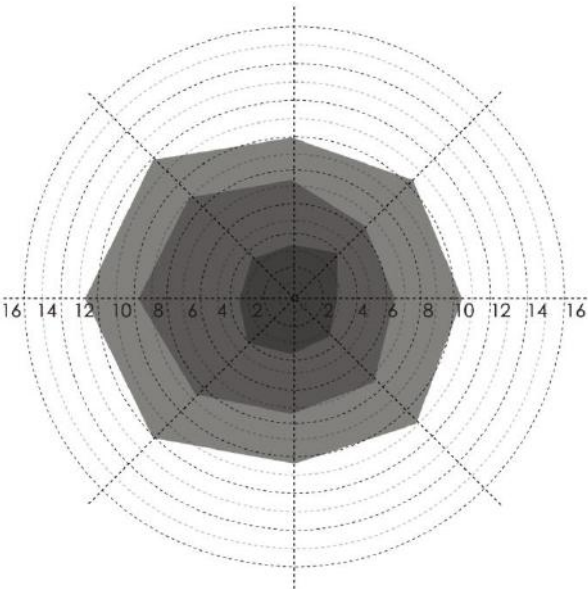
- 12-24VDC power supply, low power consumption
- ZHAGA BOOK18
- DALI2.0
- D4i
- Microwave frequency dynamic adjustment

- $\Phi 50.4 \times 35$ mm small size
- light + microwave sensors
- high performance microwave, 15 meters high, 6 m radius of the induction
- CASAMBI BLE MESH
- switch + infrared remote dual-mode configuration
- IP66

Parameters

Power supply	Voltage: 12~24VDC Current: 12V/70mA; 24V/35mA
Power consumption	< 0.7W
Dimming	DALI2.0
Sensors	Light+Microwave
Spectral acquisition range	Range: 0.01~64000Lux Wavelength: 350~1100nm, Peak 550nm
Microwave frequency	5.8GHz
Maximum hanging height	15m
Sensing radius	4-8m
Sensitivity	Default 100%, adjust through APP/IR/Dip switch
Hold time	Default 30S, adjust through APP/IR/Dip switch
Stand-by dim level	Default 0%, adjust through APP/IR/Dip switch
Stand-by period	Default ∞ , adjust through APP/IR
Turn on Illuminance	Default ∞ , adjust through APP/IR/Dip switch
Reflected light compensation	Default $\Delta 50$ lux, adjust through APP/IR
Maximum power ratio	Default 100%, adjust through APP/IR
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0

Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	CE、RED、ZHAGA、D4i、DALI2.0、BQB、ROHS



Indoor installation with a height of 15 meters

Dip Switch



Stand-by brightness			Hold time		Turn on Illuminance		Sensitivity	
	1			2		3		4
I	0	20%	I	0 5S	I	0 50Lux	I	0 75%
II	1	0%	II	1 30S	II	1 Disable	II	1 100%
Default 1			Default 1		Default 1		Default 1	

IR controller

Icon	Function	Default	Adjustable range
------	----------	---------	------------------



	Sensitivity	100%	10%/20%/30%/40%/50%/60%/70%/80%/90%/100%/FF, FF equivalent to continuously triggered by induction
	Hold time	30S	5S/30S/1M/3M/5M/10M/20M/30M
	Stand-by dim level	20%	0%/10%/20%/30%/40%/50%
	Stand-by period	FF	5S/30S/1M/3M/5M/10M/20M/30M/FF, unit S, FF equivalent to infinity
	Turn on Illuminance	FF	2/10/20/30/50/80/100/150/200/250/300/350/400/FF, unit Lux, FF equivalent to infinity
	Reflected light compensation	50Lux	50/100/200/300
	Maximum power ratio	100%	50%/60%/70%/80%/90%/100%
	Unlock button		Other buttons must be unlocked before they can be used
	Configuration send button		Send all configuration parameters displayed on the screen
	Configuration erase button		Erase all parameters configured by the IR controller
	Turn on/off button		Turn on/off lamp
	Parameter type select button		Select different parameter items
	Parameter Value Select button		Select different parameter values for the currently selected parameter type

Funtion examples

5) Turn on Illuminance: FF, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off whole day if no motion Turn on whole day if motion Hold time count down Turn off after hold time

6) Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 0%, Hold time: 30S



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Turn off after hold time

7) Turn on Illuminance: 50Lux, Sensitivity: 100%, Stand-by dim level: 20%, Hold time: 30S, Stand-by period: 1M



Turn off daytime Turn off night if on motion Turn on night if motion Hold time count down Stand-by period
count down after
hold time



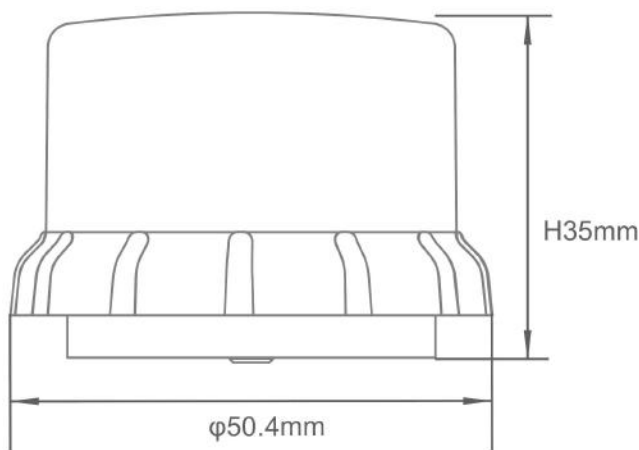
Turn off after stand-by period

8) Turn on Illuminance: 50Lux, Sensitivity: FF



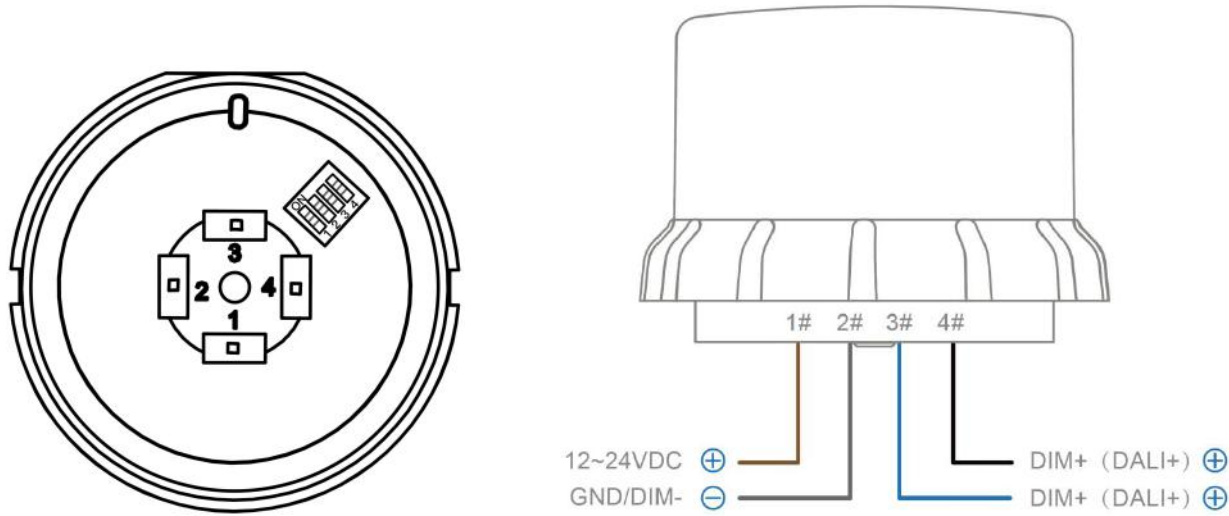
Turn off daytime Turn on night either motion or no motion

Size

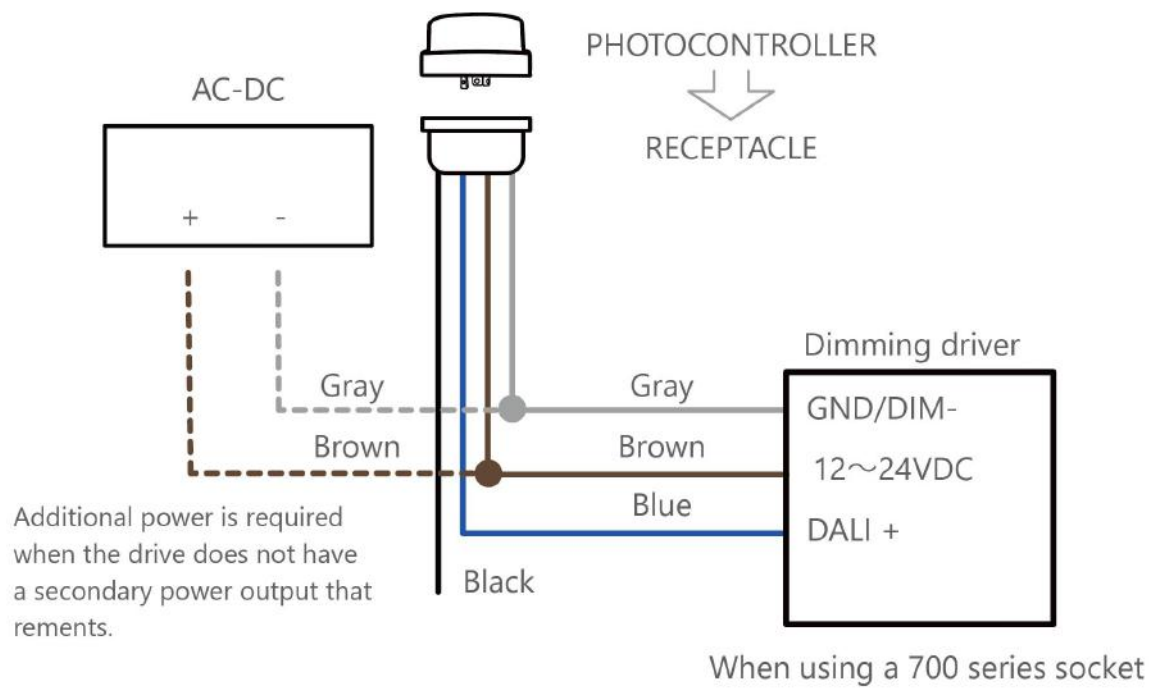


PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	DIM+ (DALI+)	Signal Output
4	DIM+ (DALI+)	Signal Output



Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Socket Options

Model	Feature	Picture
JL-700	Normal	

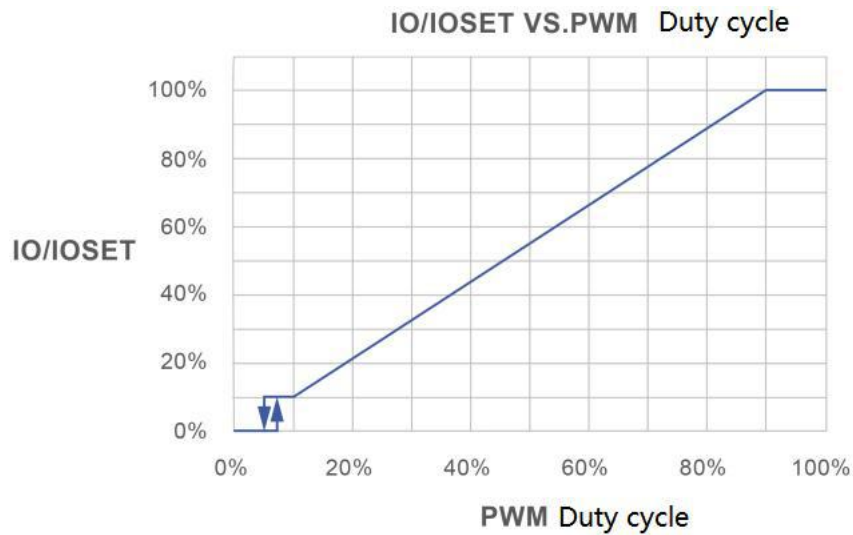
JL-700W	No cable	
JL-700S	Short thread	
JL-700T	Contact pin	
JL-710	built-in power supply	

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.

If used in outdoor scenes, rain and swaying trees may accidentally trigger induction lights.

Avoid hanging installation to prevent the product from shaking and triggering the induction light by mistake.

The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.

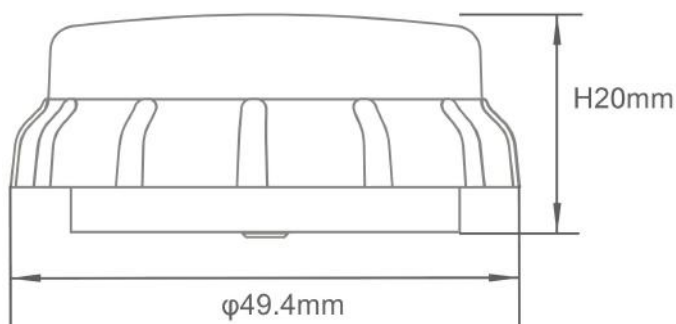
JL-731A Zhaga Book-18 Zhaga Controller



Product Summary

JL-731A series light controller products are intelligent rotary lock light controllers developed based on ZHAGA BOOK18 interface standard, which can output PWM dimming signals. All models have built-in photosensitive sensors. The light controller is suitable for lighting scenes such as roads, lawns, courtyards, and parks.

Product size chart



Features

- DC power supply, low power consumption
- ZHAGA BOOK18 interface standard
- Small size, suitable for installation in most lamps

- PWM dimming interface
- Interference lighting filtering
- Lamp reflected light compensation
- IP66

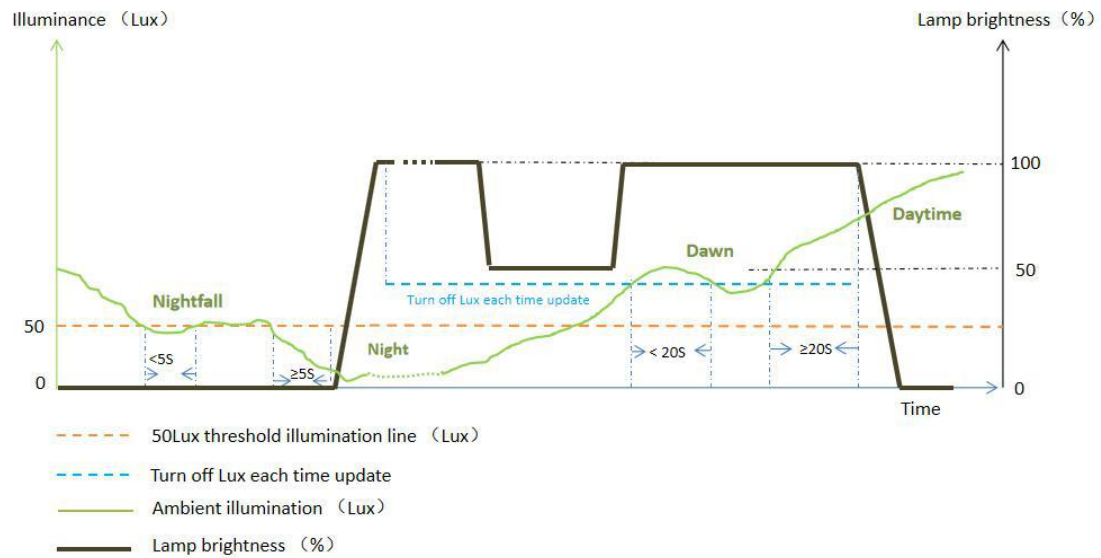
Parameters

Model	JL-731A1	JL-731A2
Power Supply	Rated voltage: 12~24VDC Rated current: 10mA	
Power Consumption	12V/5mA; 24V/6mA	
Sensor Type	Photosensitive tube	
Spectral Acquisition Range	350~1100nm, Peak wavelength 550nm	
Dimming interface	Type: PWM	
Turn on Illuminance	50Lux (± 10)	
Turn off Illuminance	Reflected light + 40Lux (± 10) after each turn on Lower limit: 50+40Lux (± 10) Upper limit: 6000Lux (± 100)	
Reflected light compensation upper limit	6000Lux (± 100)	
Initialization	After power on, the light is turned on by default and maintains 5S, then automatically turns off the light and enters the auto-sensing operation mode *1	
Turn on delay	5s	
Turn off delay	20s	
0%~100%; 100%~0%	8s	

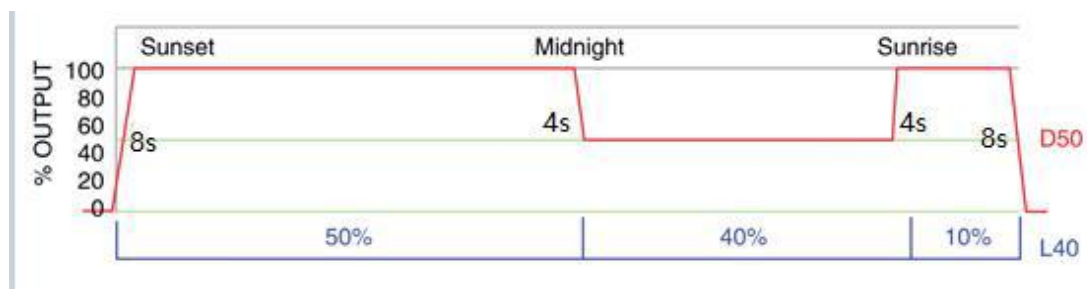
Brightness change time		
Midnight Dimming	NC	Trigger: the average center point of the first ten days (The first day default call night base is 10 hours) Dimming Ratio:50% Duration Ratio:40% Less than 10 days is calculated based on the actual number of days
Energy saving strategy	NC	Factory Preset
Mechanical Vibration	IEC60068-2-6	
Flammability Level	UL94-V0	
Operating Temperature	-40℃~70℃	
Storage Temperature	-40℃~85℃	
Operating Humidity	5%RH~99%RH	
IP Level	IP66	
Certifications	 	

Note:

*1: Some of the old versions of the sample program turn off the light by default and maintain 5S after power-on, and then enter the self-sensing operation mode.



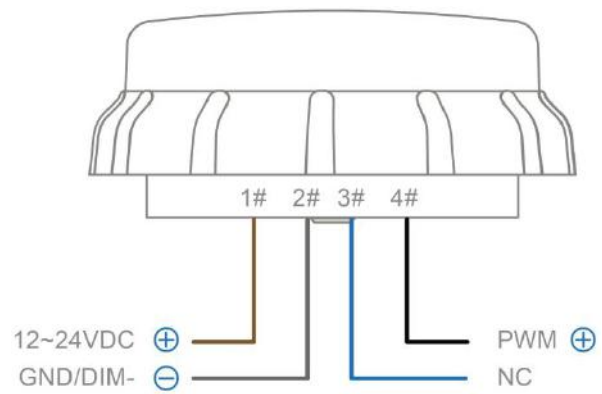
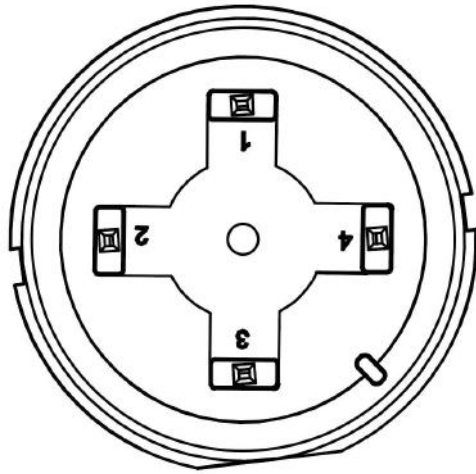
Ambient illumination and lamp brightness schematic diagram



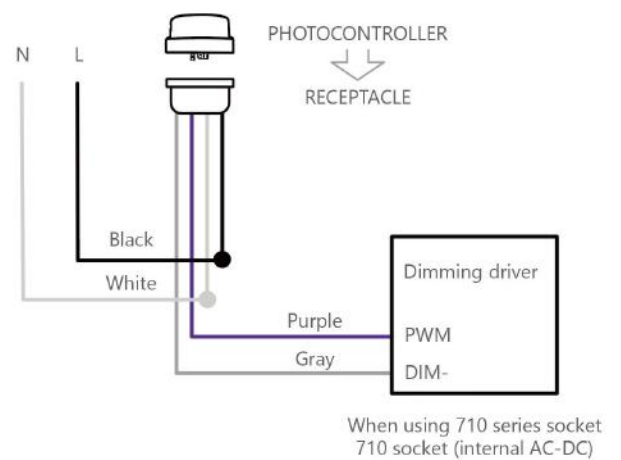
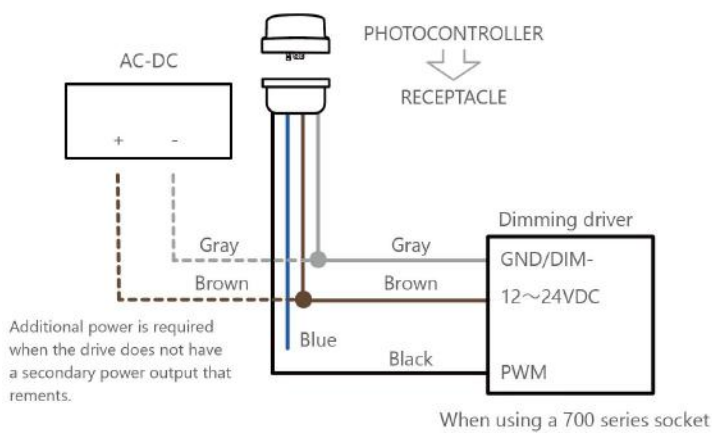
Midnight Dimming Schematic Diagram

PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DIM-	Power Input
3	NC	NC
4	PWM	Signal Output

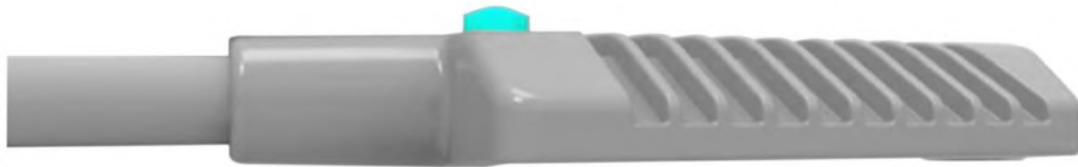
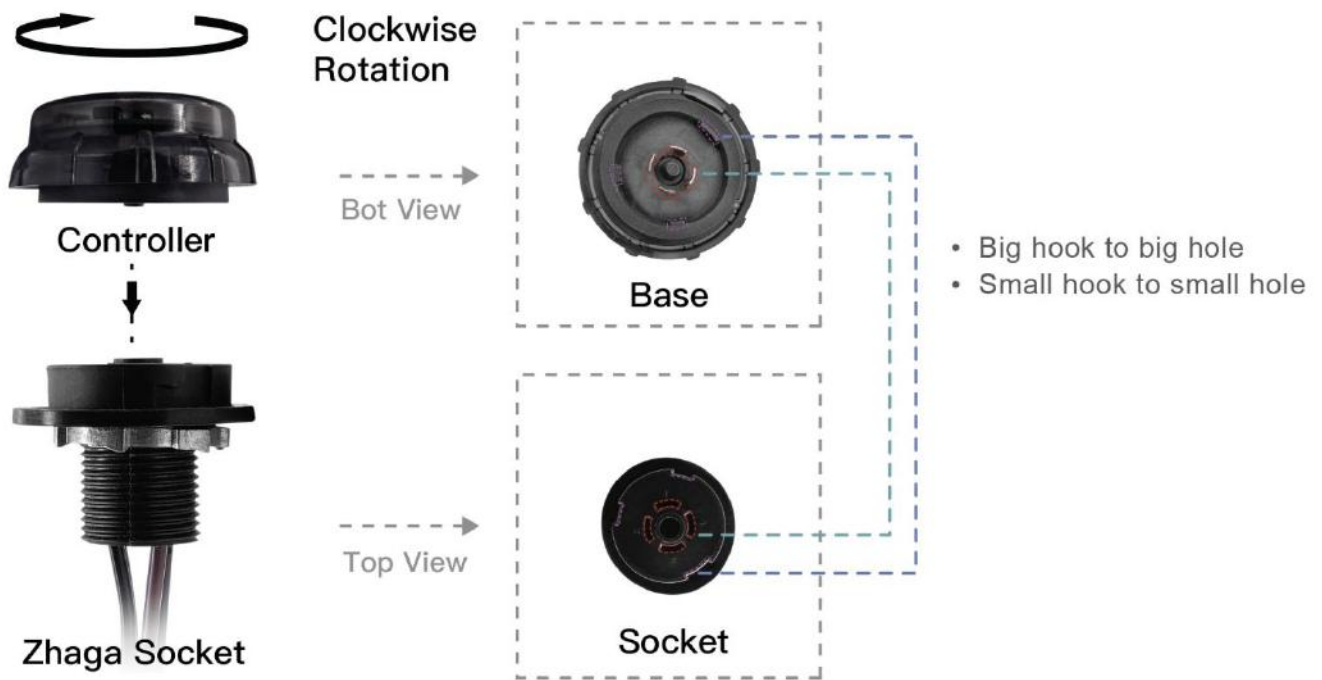


Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Top installation diagram



Bottom installation diagram

Attentions

If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the dimming interface, they need to be shorted and connected to the light controller # 2.

If the light controller is installed very close to the light source surface of the lamp and the lamp power is relatively large, it may exceed the limit of the reflected light compensation and appear to turn off itself.

Because the ZHAGA light controller does not have the ability to cut off the AC power supply of the driver, the customer needs to select a driver with an output current close to 0mA when using

the ZHAGA light controller, otherwise the phenomenon that the lamp cannot be completely turned off may occur. As shown in the output current curve of the driver specification, the lowest output current is close to 0mA.



The light controller only outputs the dimming signal to the driver, regardless of the power load of the driver and the light source.

Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.

YL-SML7W2A2B Zhaga Book-18 Sensor



Product Summary

YL-SML7W2A2B is a sensor developed based on ZHAGA BOOK18 interface standard. It adopts a combination sensor of light sensing and microwave sensing, DALI2.0 signal, supports dual-mode configuration of dip switch and infrared remote control. The light controller is suitable for road, lawn, yard, park, parking lot, factory, warehouse and other lighting scenes.

The working logic of the product is that when the illumination level is met to turn on, the lamp operates at a slightly bright. If a moving object is detected at this time, the lamp becomes fully bright, and after the full bright duration is completed, it returns to a slightly bright. When the illumination level is met to turn off, the lamp will be turned off.

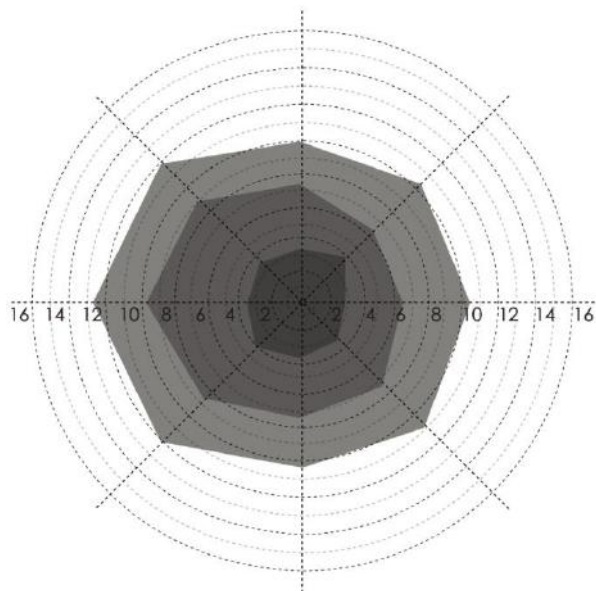
Features

- 12-24VDC power supply, low power consumption
- ZHAGA BOOK18
- DALI2.0
- D4i
- Microwave frequency dynamic adjustment
- $\Phi 50.4 \times 35$ mm small size
- light + microwave sensors
- high performance microwave, 15 meters high, 6 m radius of the induction

- switch + infrared remote dual-mode configuration
- IP66

Parameters

Power supply	Voltage: 12~24VDC Current: 12V/60mA; 24V/30mA
Power consumption	< 0.6W
Output interface	DALI2.0
Sensors	Light+Microwave
Spectral acquisition range	Range: 0.01~64000Lux Wavelength: 350~1100nm, Peak 550nm
Microwave frequency	5.8GHz
Maximum hanging height	15m
Sensing radius	4-8m
Sensitivity	Default 100%, adjust through IR/Dip switch
Turn on Illuminance	Default ∞ , adjust through IR/Dip switch
Reflected light compensation	Default $\Delta 50\text{lux}$, adjust through IR
Mechanical Vibration	IEC60068-2-6
Flammability Level	UL94-V0
Operating Temperature	-40°C~70°C
Storage Temperature	-40°C~85°C
Operating Humidity	5%RH~99%RH
IP Level	IP66
Certifications	CE、ZHAGA、D4i、DALI2.0、ROHS



Indoor installation with a height of 15 meters

Dip Switch



Turn on Illuminance			Sensitivity		
		3			4
I		0 50Lux	I		0 75%
II		1 Disable	II		1 100%
Default 1			Default 1		

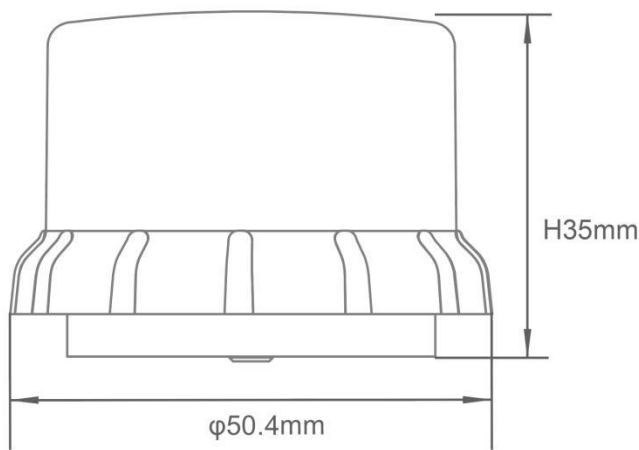
IR controller



Icon	Function	Default	Adjustable range
	Sensitivity	100%	10%/20%/30%/40%/50%/60%/70%/80%/90%/100%/FF, FF equivalent to continuously triggered by induction
	Turn on Illuminance	FF	2/10/20/30/50/80/100/150/200/250/300/350/400/FF, unit Lux, FF equivalent to infinity
	Reflected light compensation	50Lux	50/100/200/300
	Unlock button		Other buttons must be unlocked before they can be used
	Configuration send button		Send all configuration parameters displayed on the screen
	Configuration erase button		Erase all parameters configured by the IR controller
	Turn on/off button		Turn on/off lamp
	Parameter type select button		Select different parameter items
	Parameter Value Select button		Select different parameter values for the currently selected parameter type

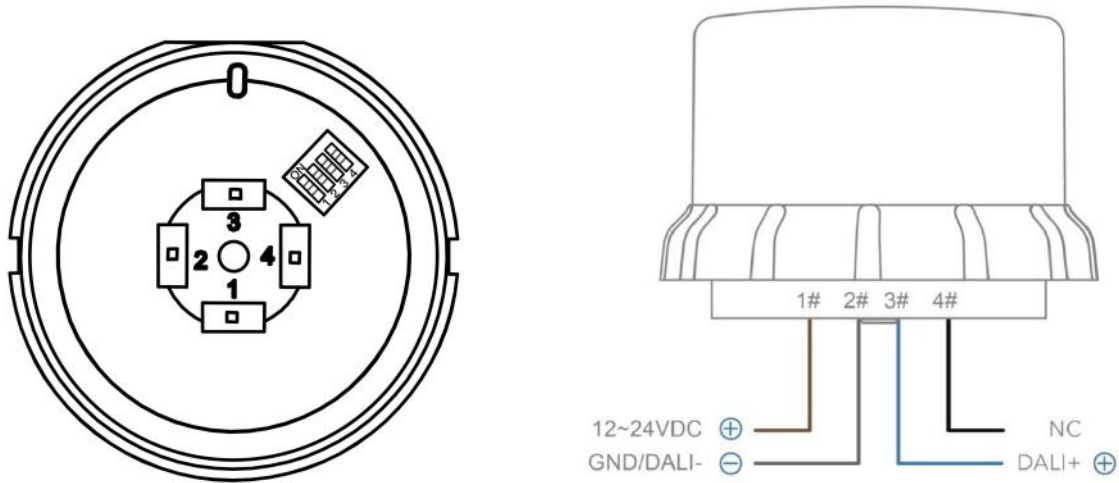
Note: The remote control is public, but for this product, only these three parameters are adjustable

Size

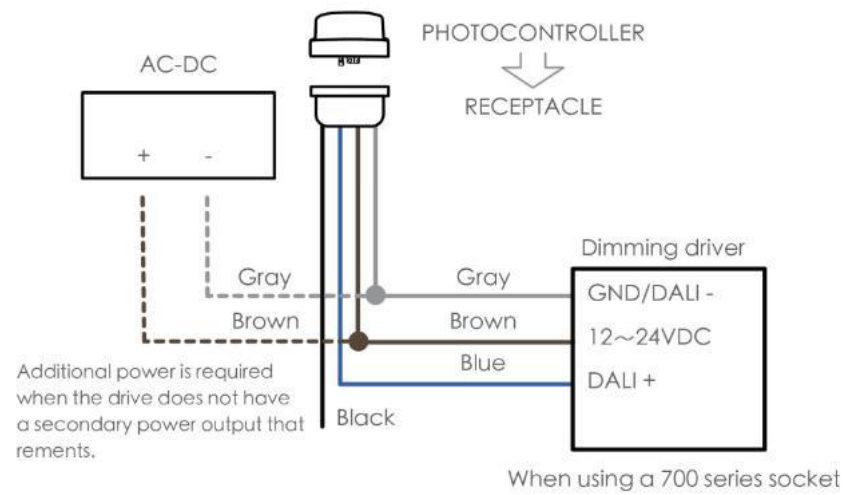


PIN

PIN	Definition	Type
1	12~24VDC	Power Input
2	GND/DALI-	Power Input
3	DIM+ (DALI+)	Signal Output
4	NC	NC



Wiring diagram



Installation

The interface of the product itself has been fool-proof design, the installation only need to tighten the controller directly to the rotatable base, as shown in Figure clockwise after insertion.



Socket Options

Model	Feature	Picture
JL-700	Normal	
JL-700W	No cable	
JL-700S	Short thread	
JL-700T	Contact pin	
JL-710	built-in power supply	

Attentions

- 1、 If the negative pole of the auxiliary power supply of the driver is separated from the negative pole of the DALI- , they need to be shorted and connected to the light controller # 2.
- 2、Don't use your fingers to block photosensitive window, it is likely that the lights will fail to turn on because of the light passing through your fingers.
- 3、 There should be no metal objects obstructing the microwave induction radiation angle, otherwise it will seriously reduce the induction performance.

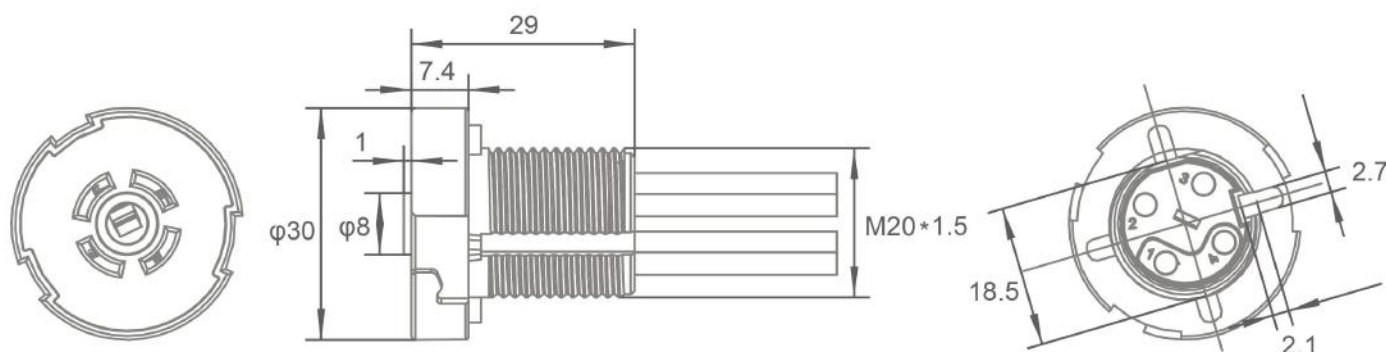
- 4、 If used in outdoor scenes, rain and swaying trees may accidentally trigger induction lights.
- 5、Avoid hanging installation to prevent the product from shaking and triggering the induction light by mistake.
- 6、 The sensing performance will be affected by the installation environment, lighting fixtures, the size and speed of the tester, and the detection range may vary.

Zhaga Book-18 Receptacle (4P, LEX-R)

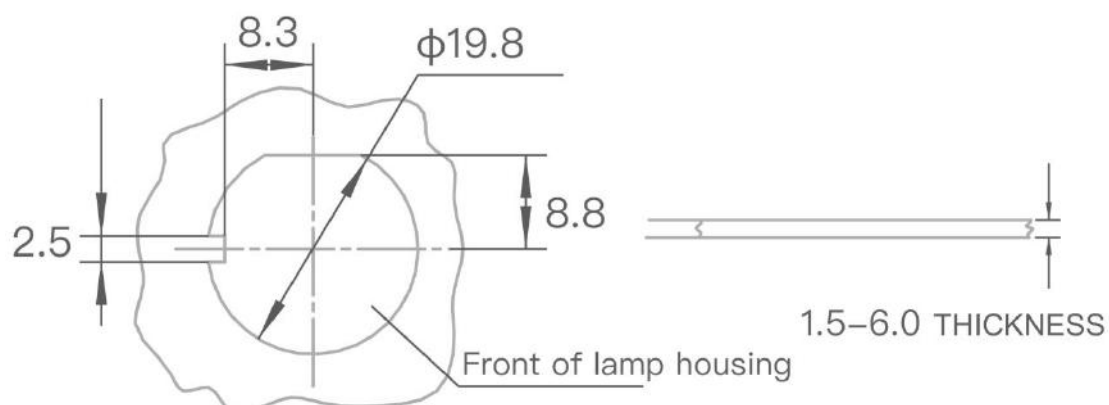


Product Summary

JL-700 locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R, Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



Features

- Standardized interface defined in Zhaga Book-18
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

Specifications

Model No.	JL-700
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C 6" min
IP	IP66
Certifications	      

*Conductor specification: # 20 conductor has UL certification

Line color definition

* Default Version

- Port 1 (Brown): 24Vdc
- Port 2 (Gray): DALI (or DALI based protocol) – /common ground
- Port 3 (Blue): DALI (or DALI based protocol) +
- Port 4 (Black): General I/O

* Optional Version

- Port 1 (RED): Positive (+) pole of the 12 or 24 V power supply
- Port 2 (BLACK)

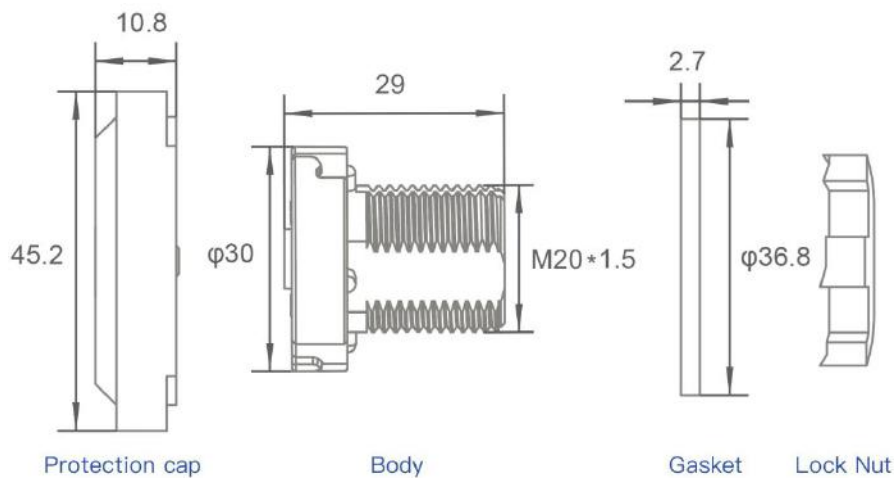
Negative (-) pole for the [DALI] protocol

Negative (-) pole for the 12 or 24V power supply (contact 1)

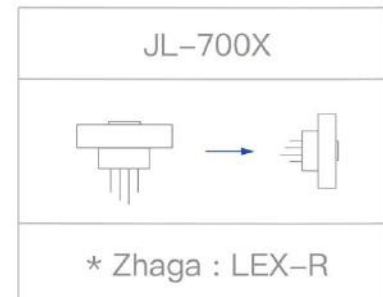
Ground for General Digital I/O (contact 4)

- Port 3 (VIOLET): Positive (+) pole for the [DALI] protocol
- Port 4 (YELLOW): General Digital I/O (greater than 7V)

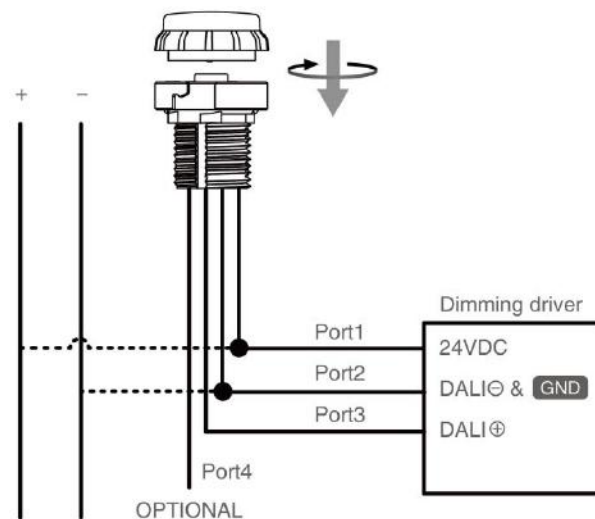
Product mix



■ RECEPTACLE & PROTECT CAP



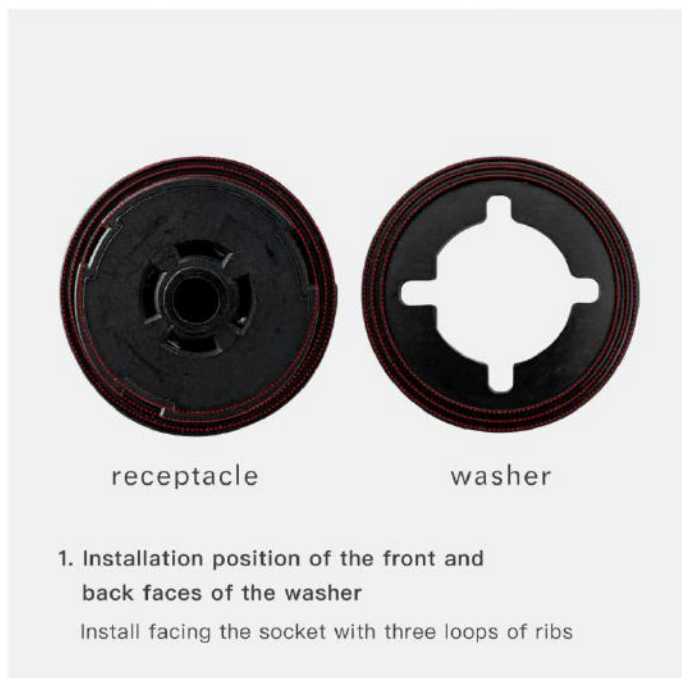
Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-710 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin

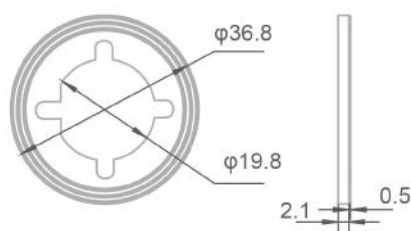
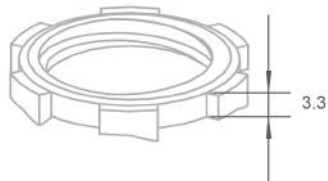
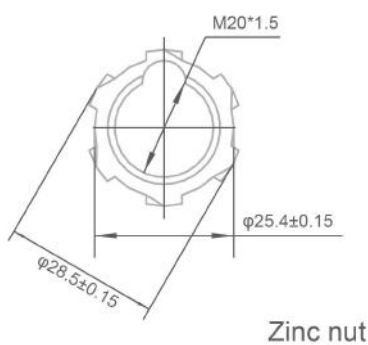
Precautions for installation of gaskets for Zhaga socket products



Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



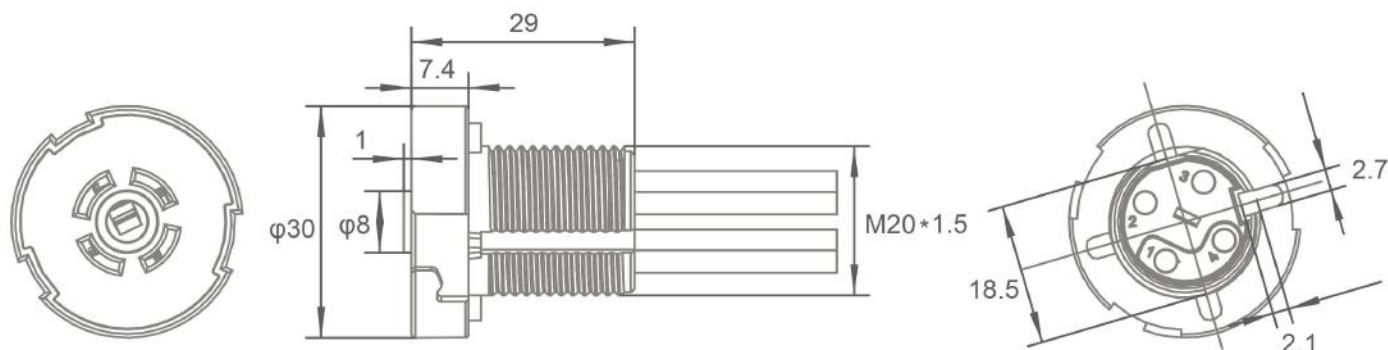
Small washer

Zhaga Book-18 Receptacle (700+retainer plate and washer)

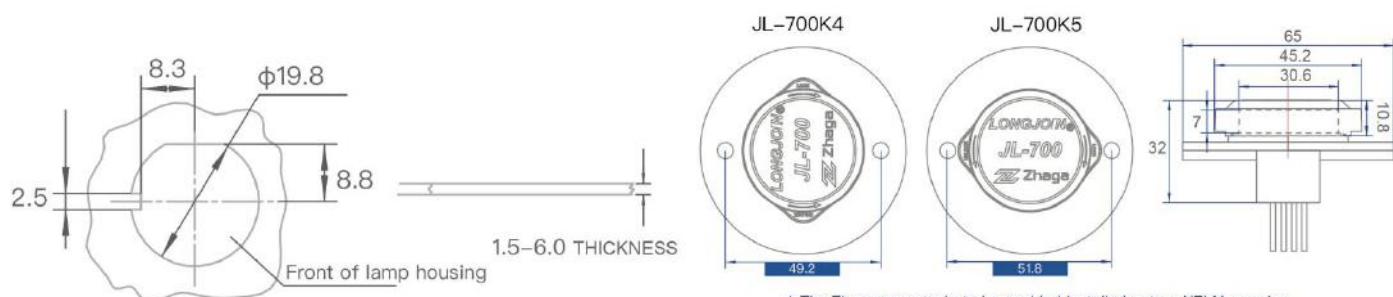


Product Summary

JL-700-K4/K5 locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R、Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



* The Zhaga receptacle to be enabled installed onto a NEMA opening.

Features

- Standardized interface defined in Zhaga Book-18
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

Specifications

Model No.	JL-700-K4/K5
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66
Certifications	      

*Conductor specification: # 20 conductor has UL certification

Line color definition

* Default Version

- Port 1 (Brown): 24Vdc
- Port 2 (Gray): DALI (or DALI based protocol) – /common ground
- Port 3 (Blue): DALI (or DALI based protocol) +
- Port 4 (Black): General I/O

* Optional Version

- Port 1 (RED): Positive (+) pole of the 12 or 24 V power supply
- Port 2 (BLACK)

Negative (-) pole for the [DALI] protocol

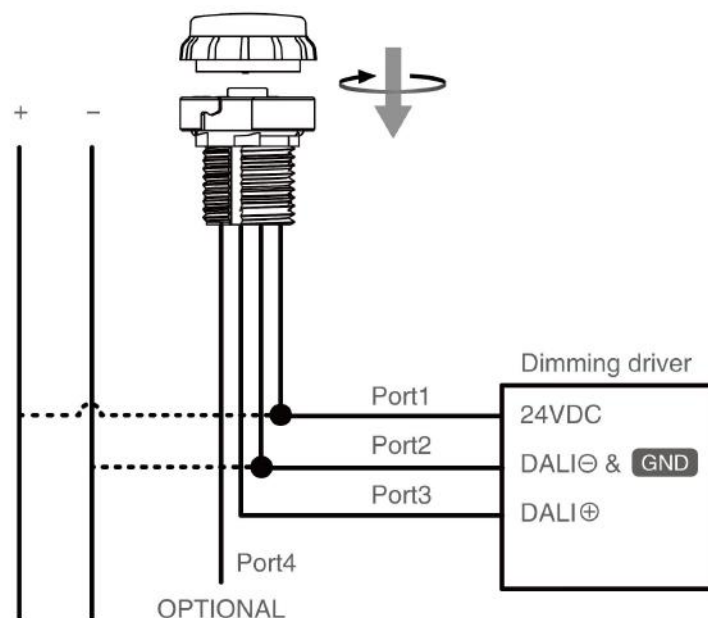
Negative (-) pole for the 12 or 24V power supply (contact 1)

Ground for General Digital I/O (contact 4)

- Port 3 (VIOLET): Positive (+) pole for the [DALI] protocol

- Port 4 (YELLOW): General Digital I/O (greater than 7V)

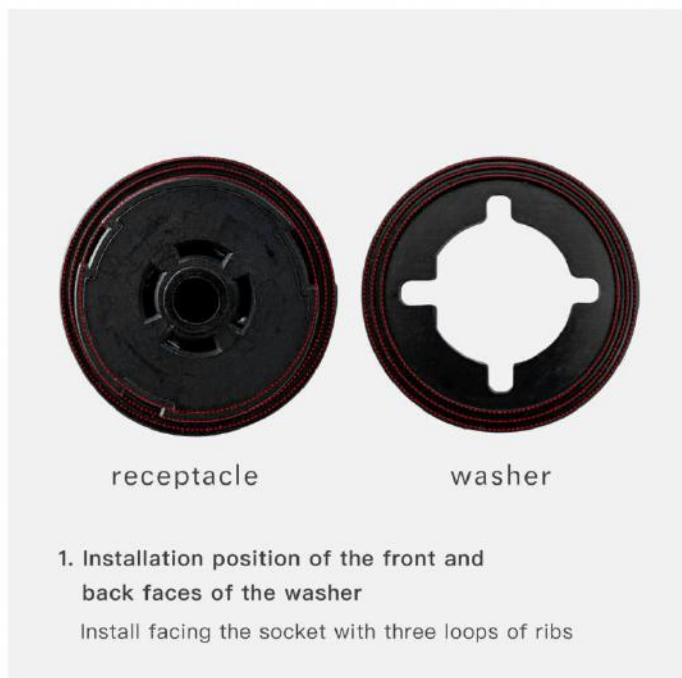
Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-710 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin

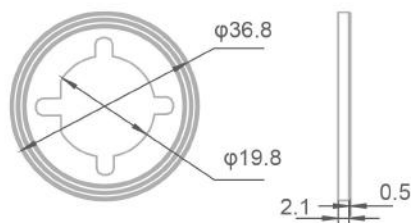
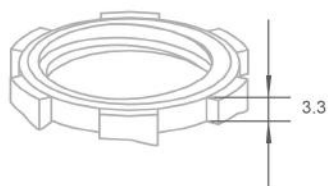
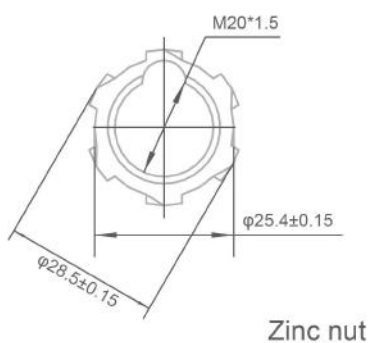
Precautions for installation of gaskets for Zhaga socket products



Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



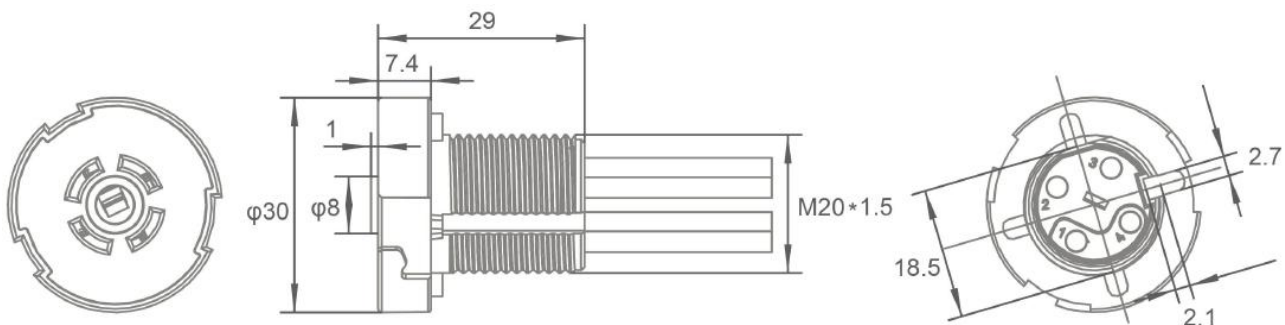
Small washer

Zhaga Book-18 Receptacle (without protective cover)

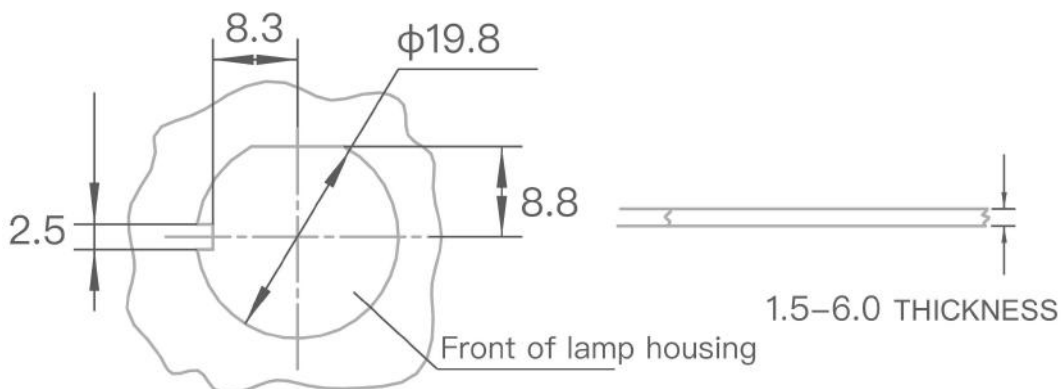


Product Summary

JL-700X locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R、Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



Features

- Standardized interface defined in Zhaga Book-18
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

Specifications

Model No.	JL-700X
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66
Certifications	      

*Conductor specification: # 20 conductor has UL certification

Line color definition

* Default Version

- Port 1 (Brown): 24Vdc
- Port 2 (Gray): DALI (or DALI based protocol) – /common ground
- Port 3 (Blue): DALI (or DALI based protocol) +
- Port 4 (Black): General I/O

* Optional Version

- Port 1 (RED): Positive (+) pole of the 12 or 24 V power supply
- Port 2 (BLACK)

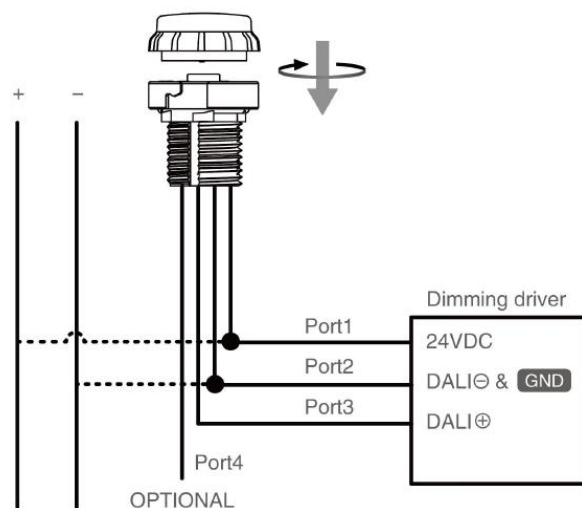
Negative (-) pole for the [DALI] protocol

Negative (-) pole for the 12 or 24V power supply (contact 1)

Ground for General Digital I/O (contact 4)

- Port 3 (VIOLET): Positive (+) pole for the [DALI] protocol
- Port 4 (YELLOW): General Digital I/O (greater than 7V)

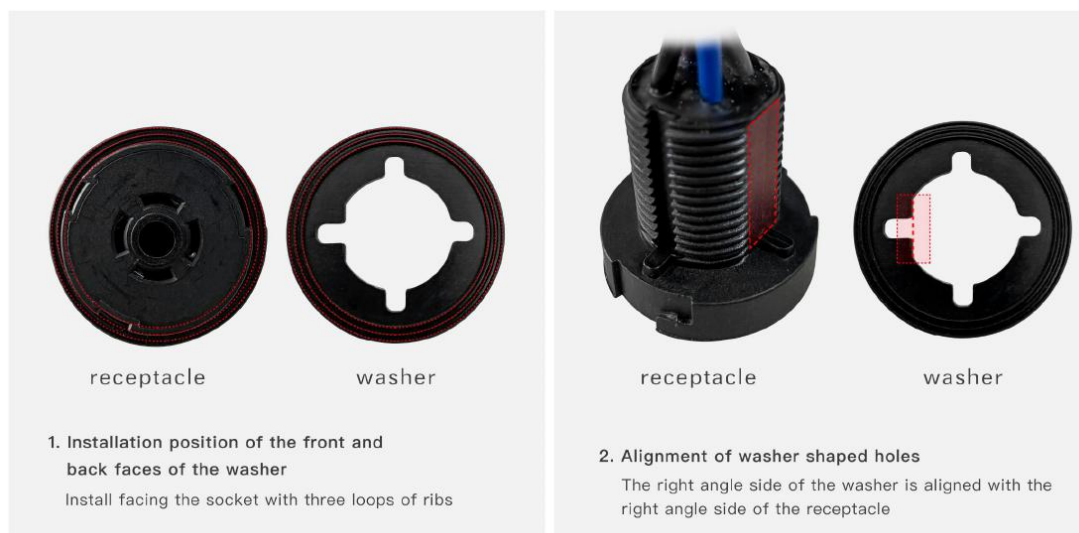
Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-710 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin

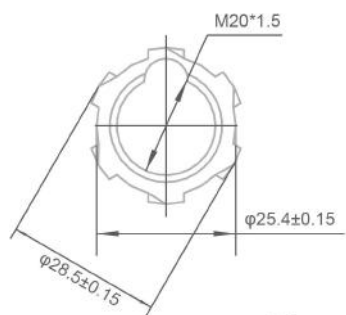
Precautions for installation of gaskets for Zhaga socket products



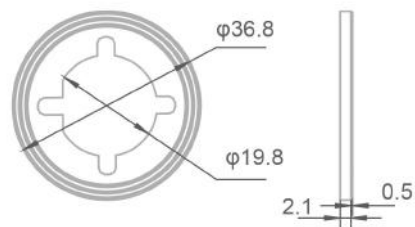
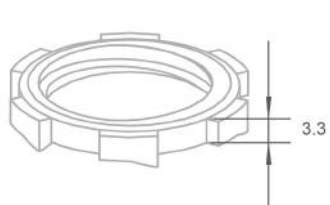
Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



Zinc nut



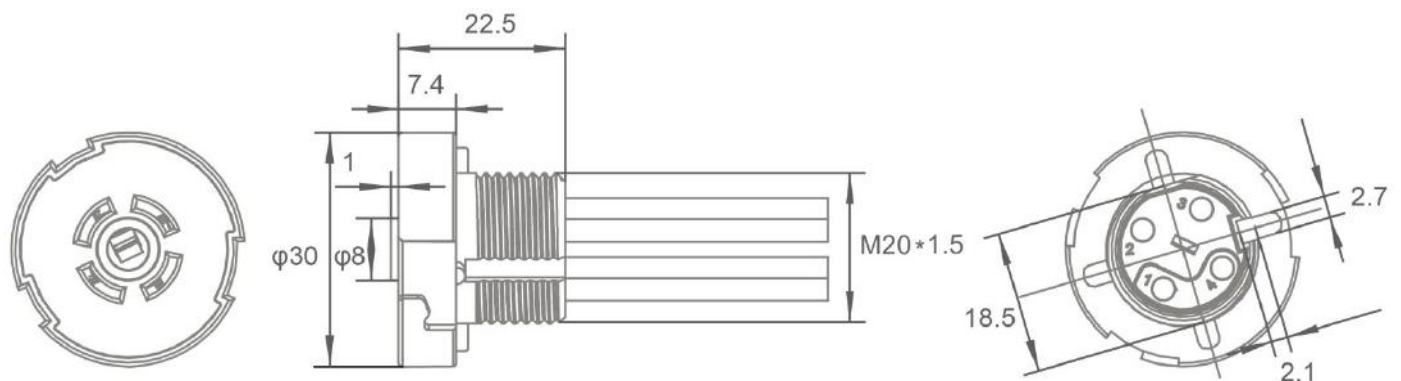
Small washer

Zhaga Book-18 Receptacle (Short thread)

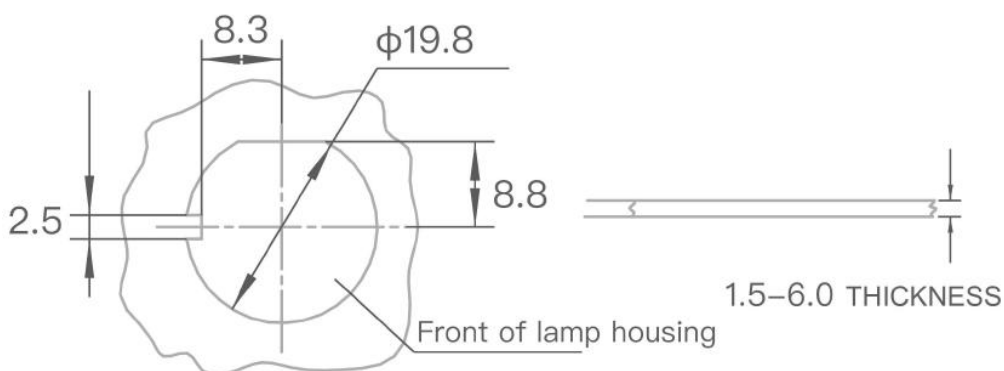


Product Summary

JI-700S locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R、Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



Features

- Standardized interface defined in Zhaga Book-18

- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

Specifications

Model No.	JL-700S
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66
Certifications	      

*Conductor specification: # 20 conductor has UL certification

Line color definition

* Default Version

- Port 1 (Brown): 24Vdc
- Port 2 (Gray): DALI (or DALI based protocol) – /common ground
- Port 3 (Blue): DALI (or DALI based protocol) +
- Port 4 (Black): General I/O

* Optional Version

- Port 1 (RED): Positive (+) pole of the 12 or 24 V power supply
- Port 2 (BLACK)

Negative (-) pole for the [DALI] protocol

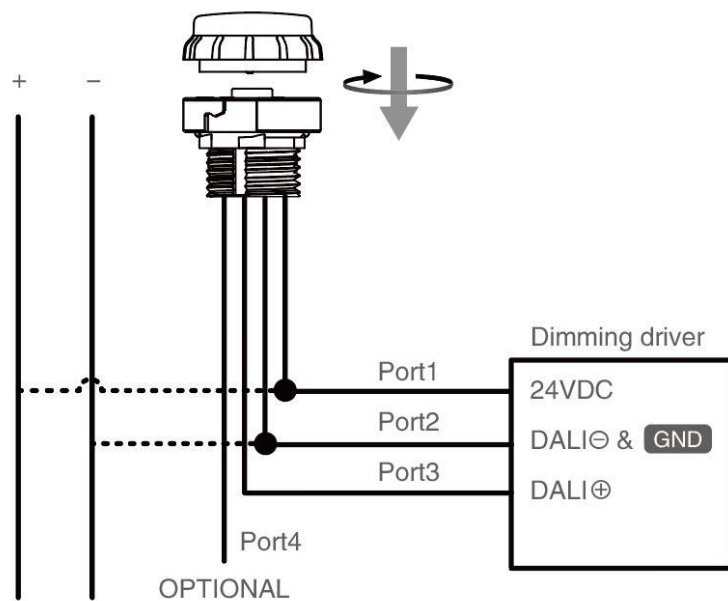
Negative (-) pole for the 12 or 24V power supply (contact 1)

Ground for General Digital I/O (contact 4)

- Port 3 (VIOLET): Positive (+) pole for the [DALI] protocol

- Port 4 (YELLOW): General Digital I/O (greater than 7V)

Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-710 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin

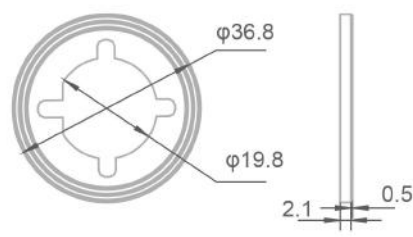
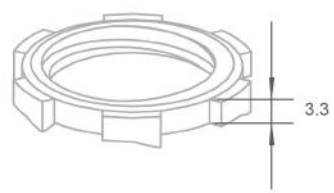
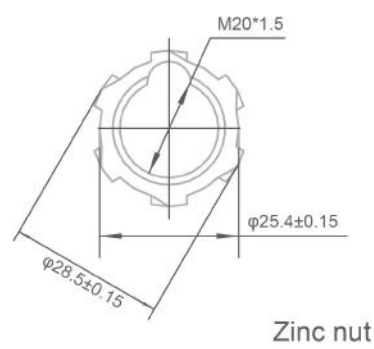
Precautions for installation of gaskets for Zhaga socket products



Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



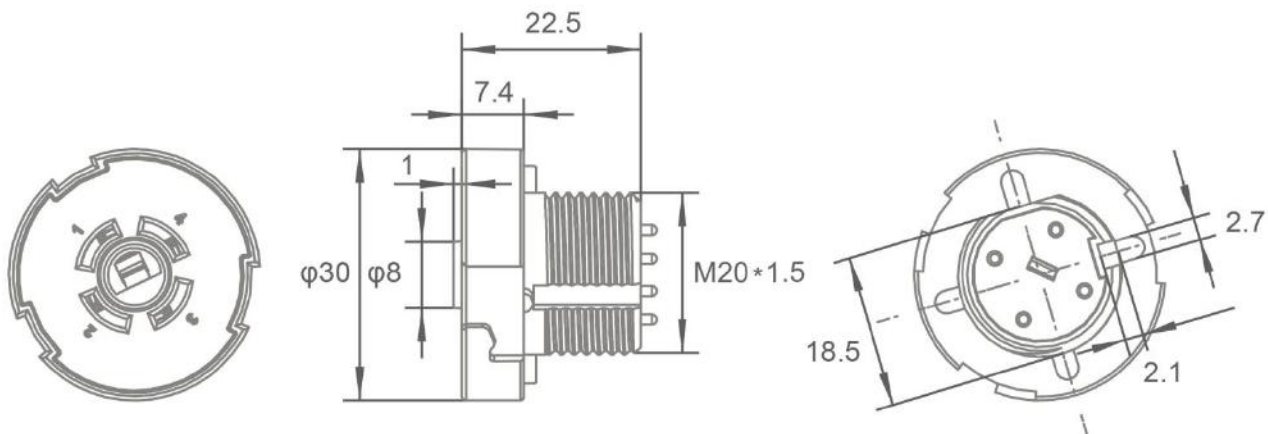
Small washer

Zhaga Book-18 Receptacle (Spring needle plate)

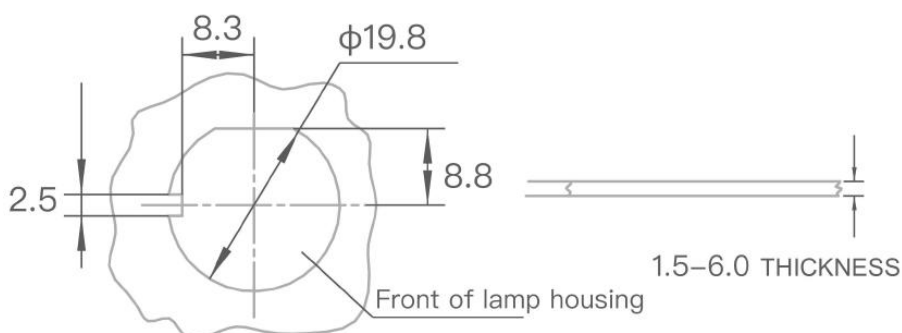


Product Summary

JL-700T locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R、Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



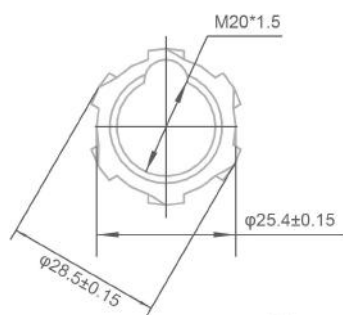
Features

- Standardized interface defined in Zhaga Book-18
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

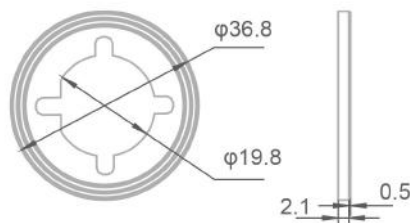
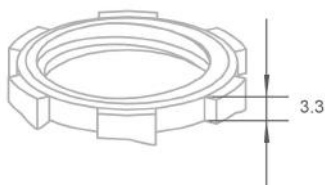
Specifications

Model No.	JL-700T
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
IP	IP66
Certifications	      

Assemblies



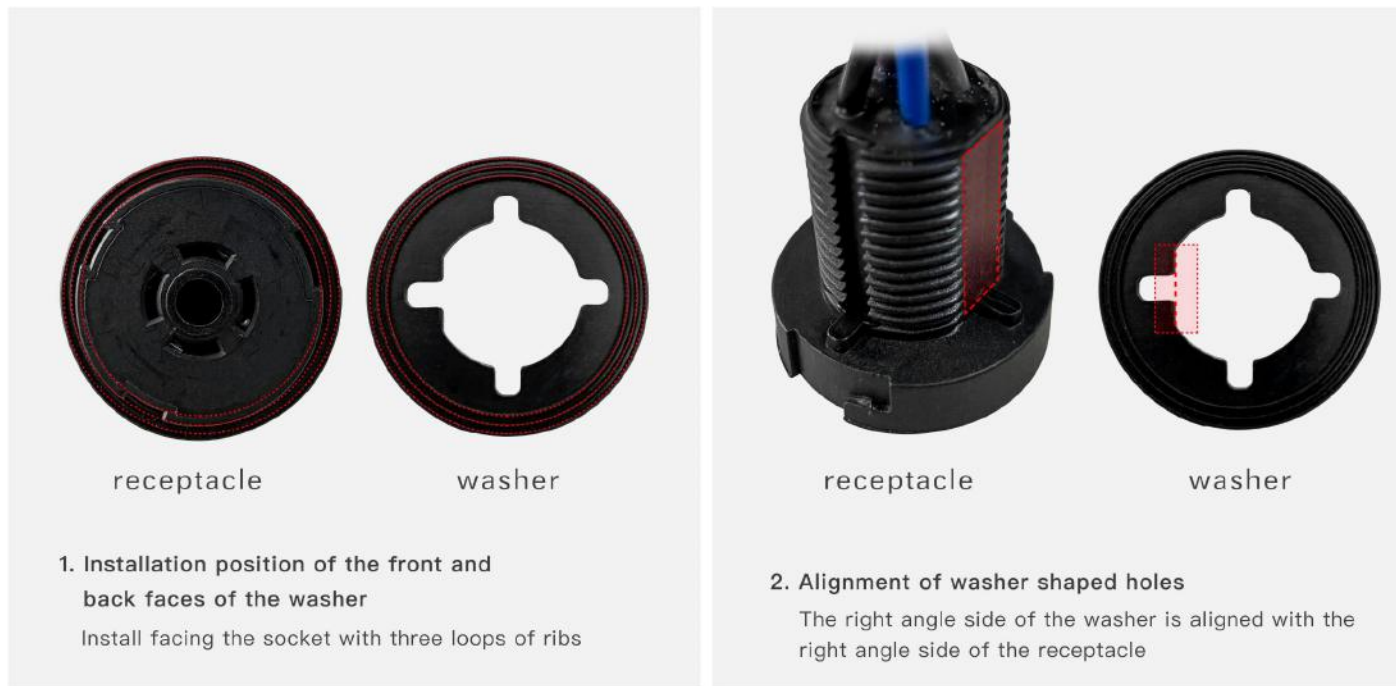
Zinc nut



Small washer

Wiring diagram

Precautions for installation of gaskets for Zhaga socket products



Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

JL-700M

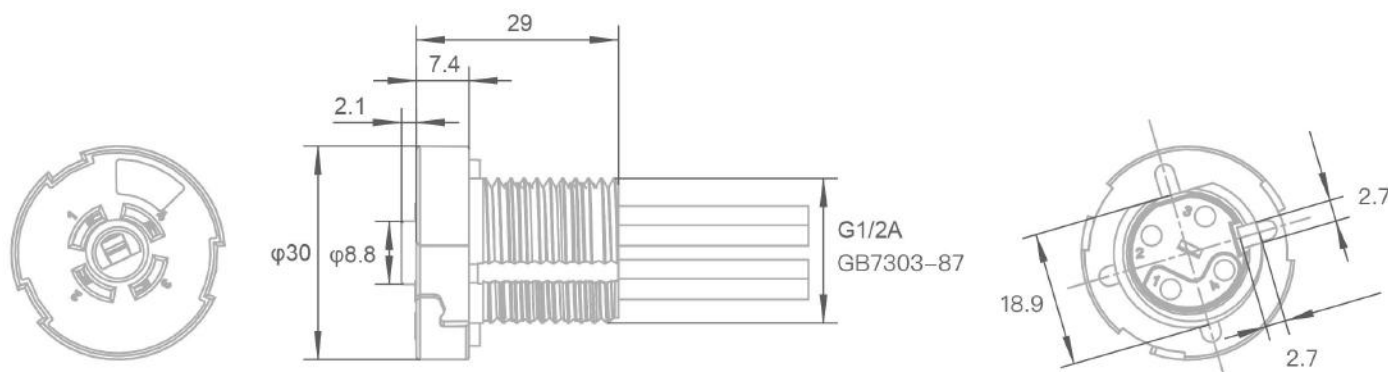
Class Zhaga Book-18 lock socket



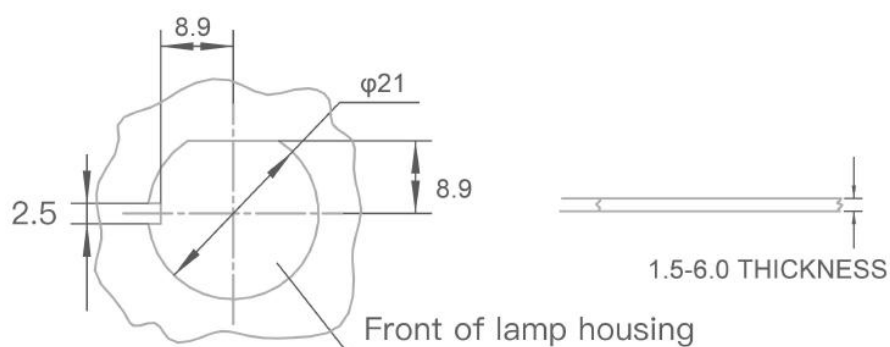
Product Summary

Similar to Zhaga Book-18 standard, JL-700M socket is suitable for 0-10V dimming scheme, which is convenient for developing standard equipment suitable for road lighting, regional lighting or residential lighting.

According to the equipment arrangement, these equipment can adopt monitoring, communication, control and other functions based on 0-10V dimming.



Drilling plan



Benefits

- similar to Zhaga Book-18 standard interface, used for 0-10V dimming scheme
- small size, suitable for more lamps
- advanced sealing, IP66 can be achieved without installing screws
- expandable solution: it is allowed to use Φ 40-80mm expansion controller with the same connection interface in the central management system
- flexible installation position, which can be installed on the top / bottom / side of the lamp
- integrated single gasket to seal lamps and modules to minimize assembly time

Applications

- street and area lighting
- outdoor lighting - wall components - parking - Walkways
- light sensing control
- central management system communication
- other sensor modules, such as motion detection, remote operation

Features

Contact rating: 1.5A, 30VDC (typical 24V)

Meet 10kV common mode surge test requirements

Hot pluggable

Quadrupole contact

Rated impulse voltage: 0.8kv

Insulation protection: Class II

Temperature range: - 40 to 70 ° C

Before installing lamps, the main power supply should be turned off

Specifications

Model No.	JL-700M
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66

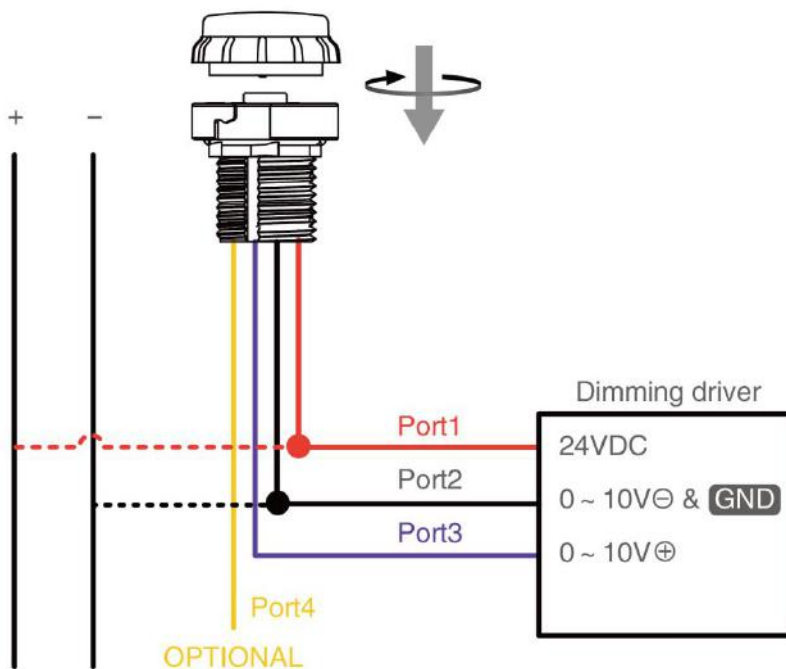
*Conductor specification: # 20 conductor has UL certification

Line color definition

* Default Version

- Port 1 (RED): 24 VDC
- Port 2 (BLACK): 0~10V-/GND
- Port 3 (VIOLET): 0~10V+
- Port 4 (YELLOW): General I/O

Wiring diagram



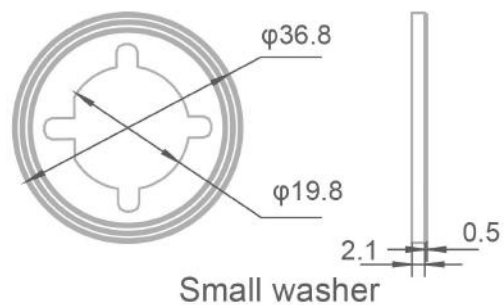
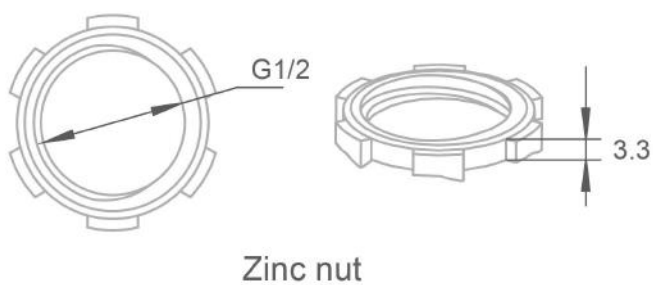
Precautions for installation of gaskets for Zhaga socket products

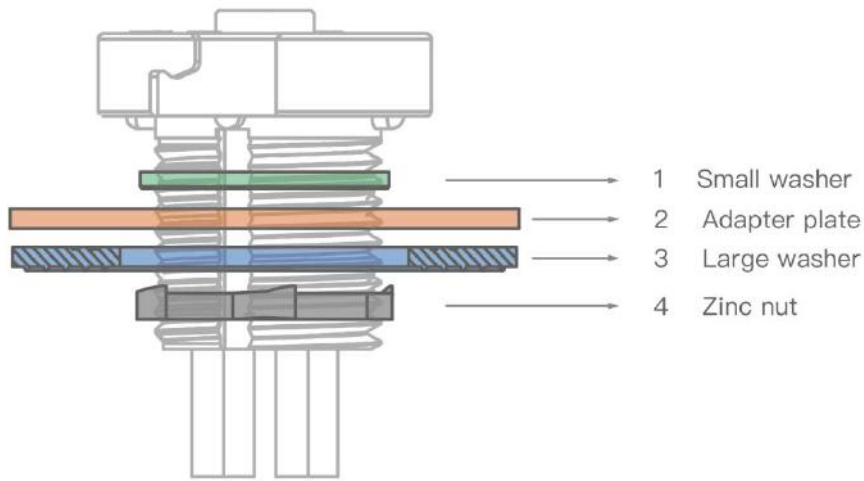


Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies





Benefits

- similar to Zhaga Book-18 standard interface, used for 0-10V dimming scheme
- small size, suitable for more lamps
- advanced sealing, IP66 can be achieved without installing screws
- expandable solution: it is allowed to use Φ 40-80mm expansion controller with the same connection interface in the central management system
- flexible installation position, which can be installed on the top / bottom / side of the lamp
- integrated single gasket to seal lamps and modules to minimize assembly time

Applications

- street and area lighting
- outdoor lighting - wall components - parking - Walkways
- light sensing control
- central management system communication
- other sensor modules, such as motion detection, remote operation

Features

Contact rating: 1.5A, 30VDC (typical 24V)

Meet 10kV common mode surge test requirements

Hot pluggable

Quadrupole contact

Rated impulse voltage: 0.8kv

Insulation protection: Class II

Temperature range: - 40 to 70 ° C

Before installing lamps, the main power supply should be turned off

Specifications

Model No.	JL-700M-K4
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66
Certifications	     

*Conductor specification: # 20 conductor has UL certification

Wiring diagram

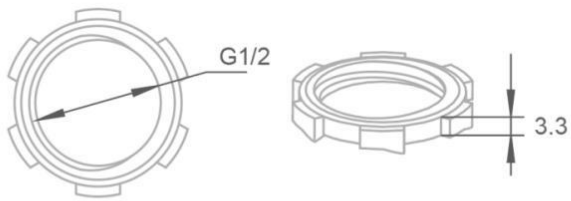
Precautions for installation of gaskets for Zhaga socket products



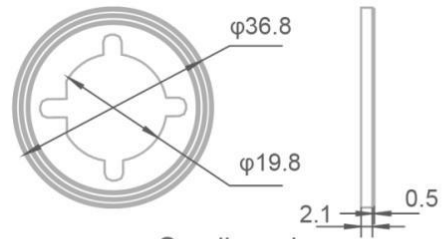
Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

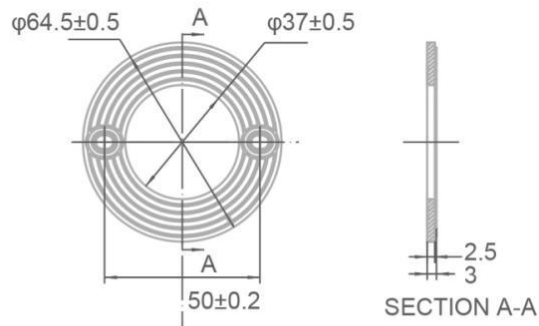
Assemblies



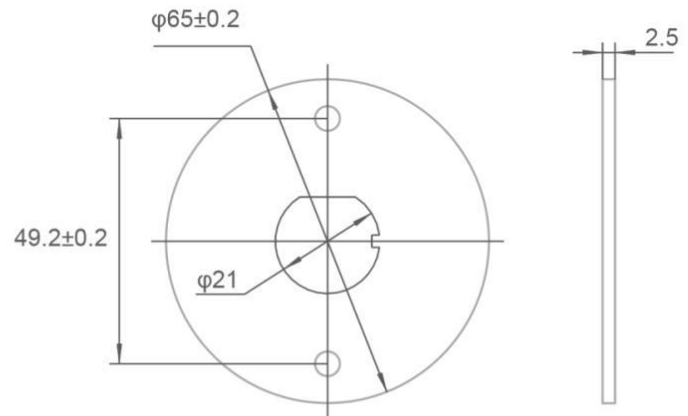
Zinc nut



Small washer



Large washer



Adapter plate

JL-700W

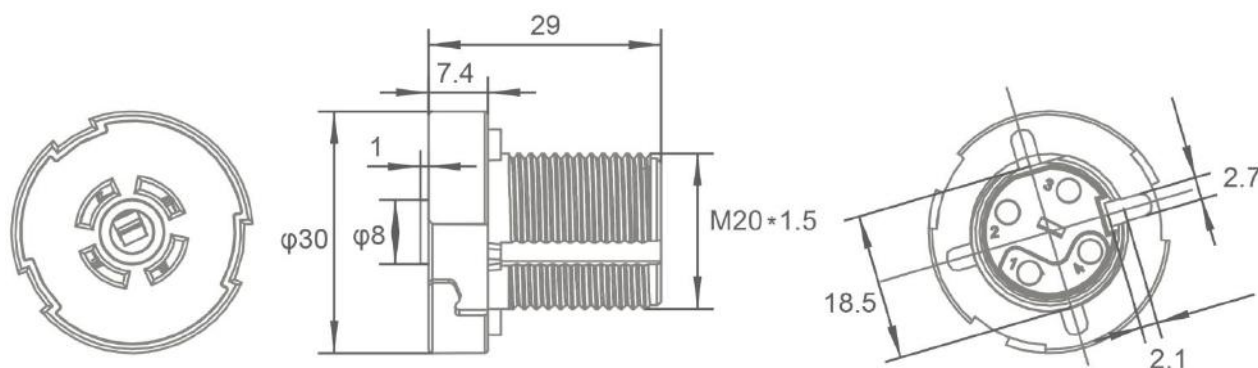


Zhaga Book-18 Receptacle (Leadless version)

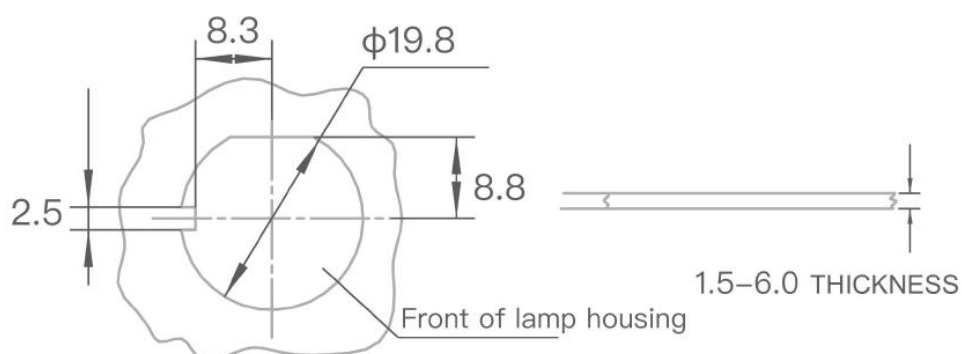


Product Summary

JL-700W locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R、Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



FEATURES

- Standardized interface defined in Zhaga Book-18
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

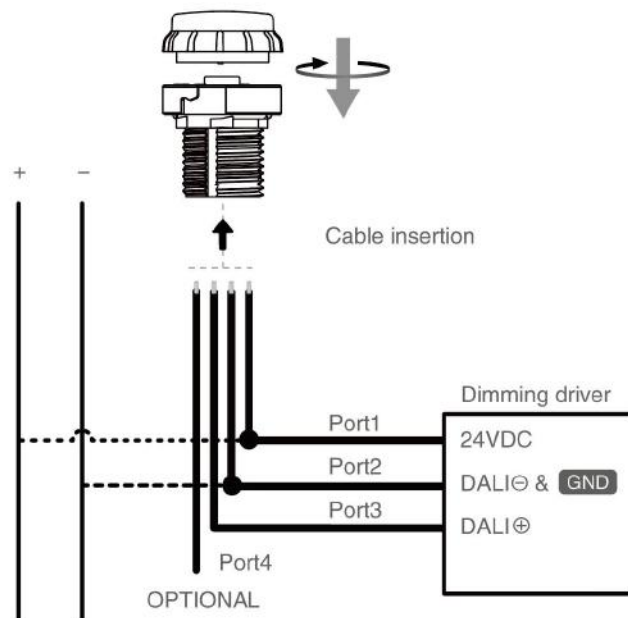
Specifications

Model No.	JL-700W
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	-40°C ~ +70 °C
Ambient Temperature	96%
Wires	20~22AWG , Strip the head 9 ~ 11mm and tin it
IP	IP66
Certifications	      

Line color definition

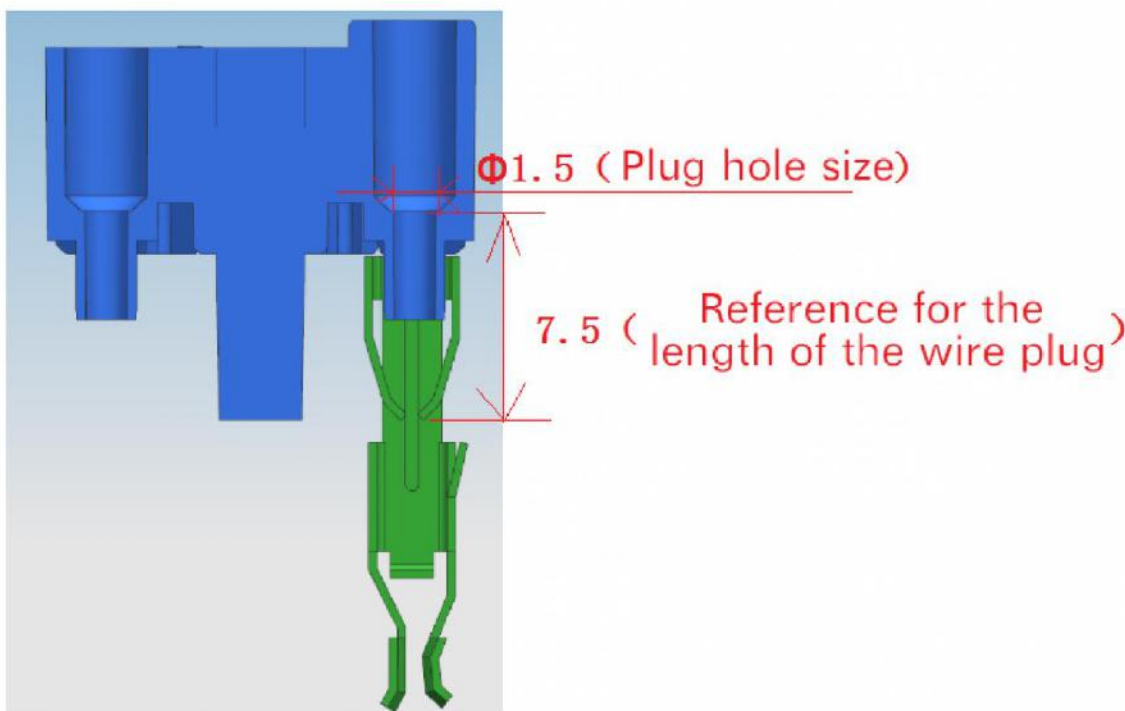
- Port 1: 24VDC
- Port 2: DALI-/GND
- Port 3: DALI+
- Port 4: reservel/O

Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-710 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin



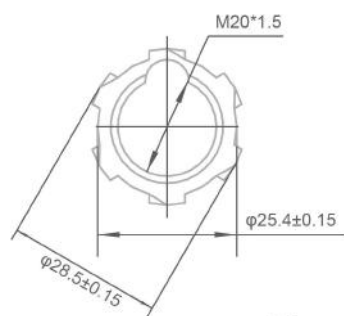
Precautions for installation of gaskets for Zhaga socket products



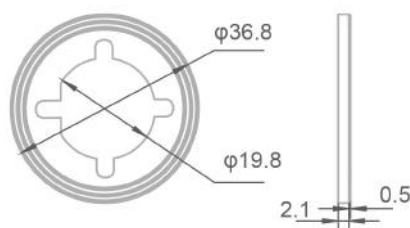
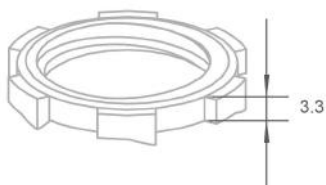
Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



Zinc nut



Small washer

Suggested wires

20~22AWG, lead ends tinned

JL-770W

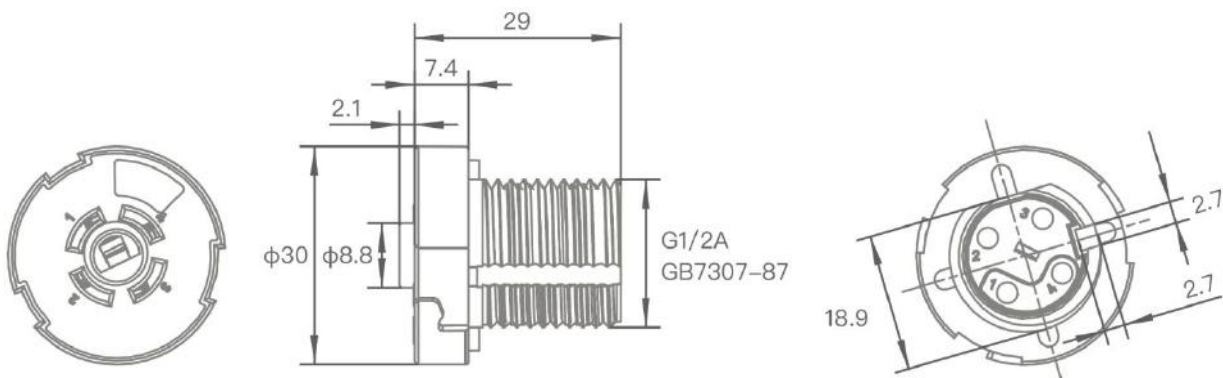
Class Zhaga Book-18 lock socket (no wire version)



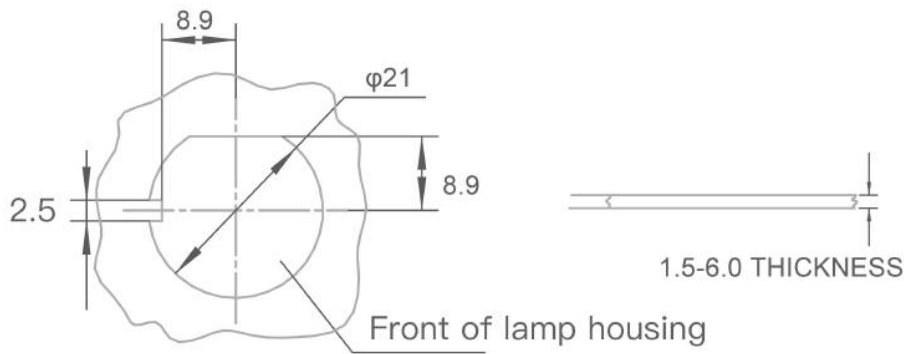
Product Summary

Similar to Zhaga Book-18 standard, JL-770W socket is suitable for 0-10V dimming scheme, which is convenient for developing standard equipment suitable for road lighting, regional lighting or residential lighting.

According to the equipment arrangement, these equipment can adopt monitoring, communication, control and other functions based on 0-10V dimming.



Drilling plan



Benefits

- leadless version, convenient for modification and new installation
- similar to Zhaga Book-18 standard interface, used for 0-10V dimming scheme
- small size, suitable for more lamps
- advanced sealing, IP66 can be achieved without installing screws
- expandable solution: it is allowed to use Φ 40-80mm expansion controller with the same connection interface in the central management system
- flexible installation position, which can be installed on the top / bottom / side of the lamp
- integrated single gasket to seal lamps and modules to minimize assembly time

Applications

- street and area lighting
- outdoor lighting - wall components - parking - Walkways
- light sensing control
- central management system communication
- other sensor modules, such as motion detection, remote operation

Features

Contact rating: 1.5A, 30VDC (typical 24V)

Meet 10kV common mode surge test requirements

Hot pluggable

Quadrupole contact

Rated impulse voltage: 0.8kv

Insulation protection: Class II

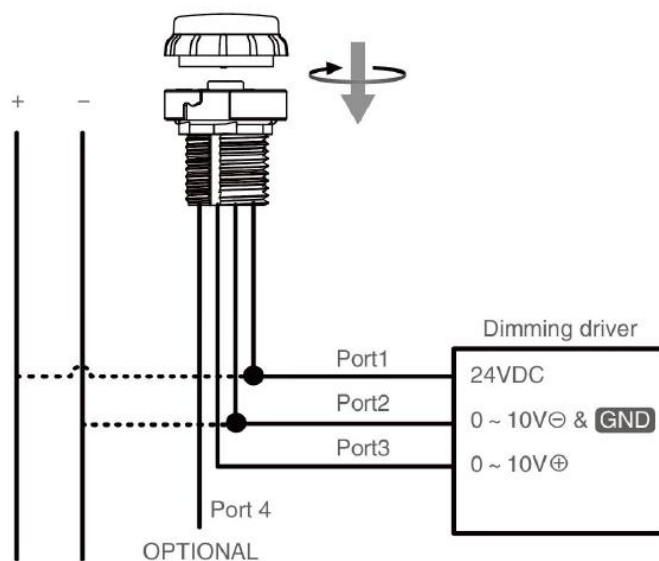
Temperature range: - 40 to 70 ° C

Before installing lamps, the main power supply should be turned off

Specifications

Model No.	JL-770W
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	-40°C ~ +70 °C
Ambient Temperature	96%
Wires	20~22AWG , Strip the head 9 ~ 11mm and tin it
IP	IP66
Certifications	     

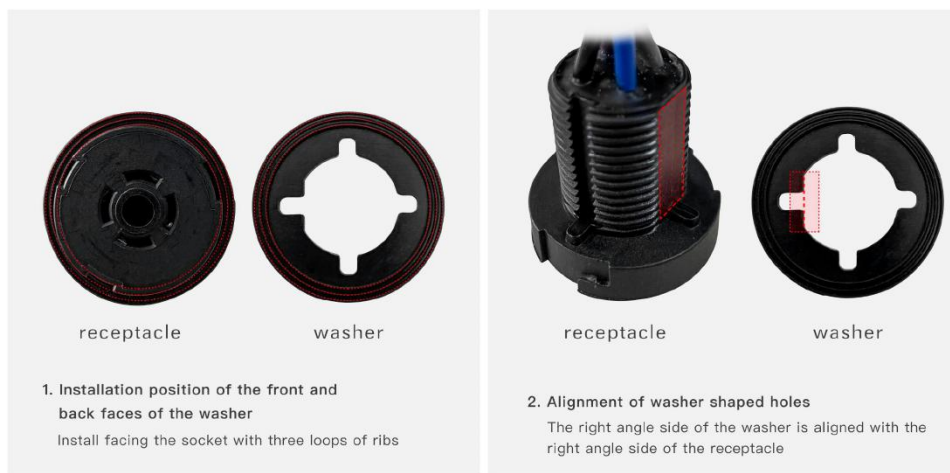
Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-770 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin

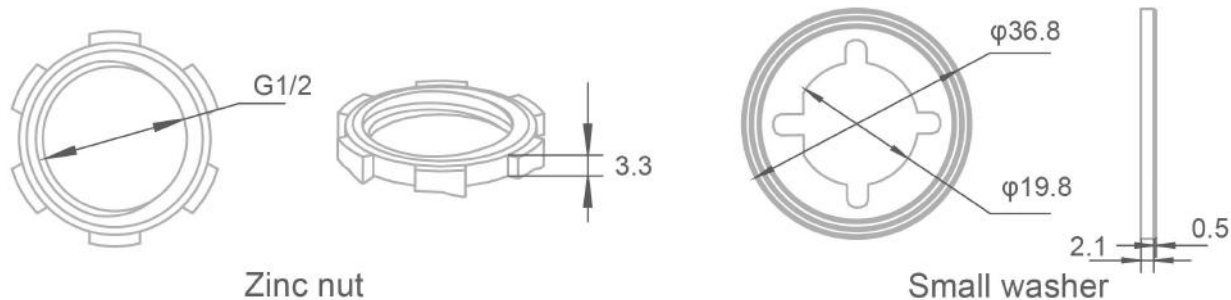
Precautions for installation of gaskets for Zhaga socket products



Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



Suggested wires

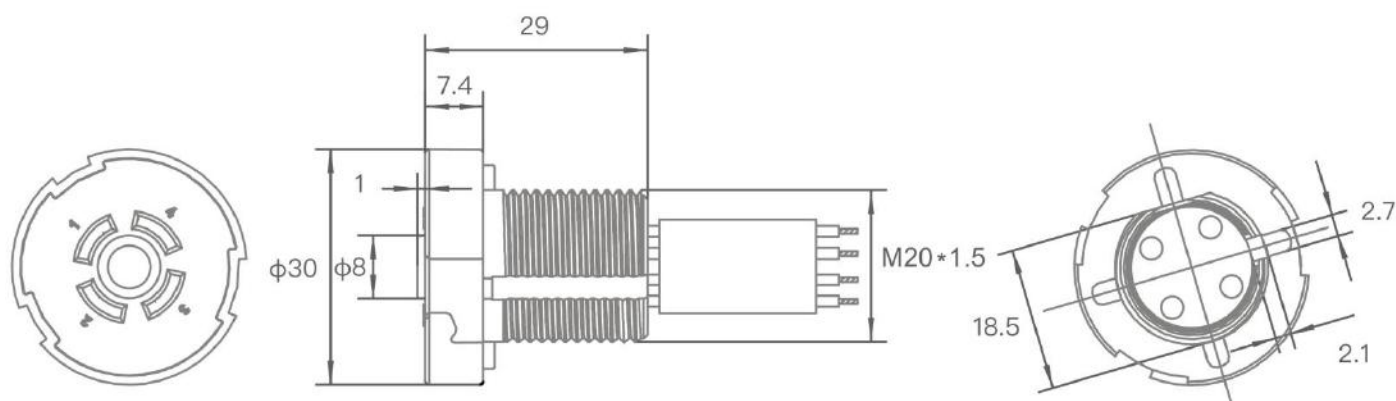
20~22AWG, lead ends tinned

Zhaga Book-18 Receptacle (Cable version)

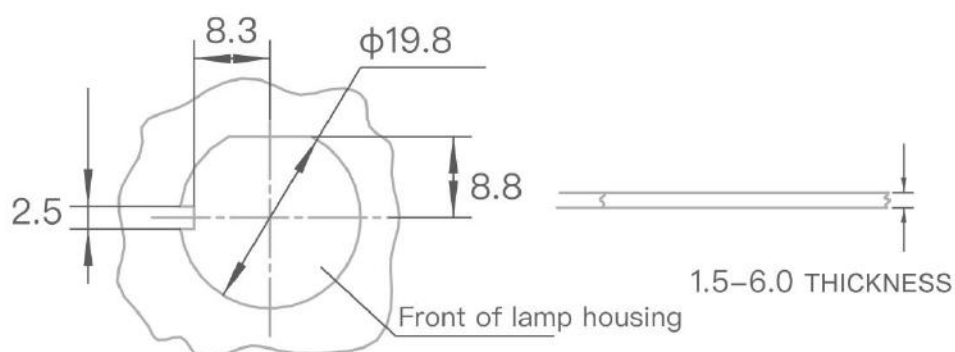


Product Summary

JL-700L locking socket meets the requirements of Zhaga Book-18 standard interface (Z-LEX-R、Z-LEX-C) and has passed relevant certification, which is convenient for the development and installation of road lighting, regional lighting or commercial and residential lighting, such as street lights, industrial and mining lights, corridor lights, wall lights, etc.



Drilling plan



Features

- cable (brown gray blue black)
- Standardized interface defined in Zhaga Book-18
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

Specifications

Model No.	JL-700L
Rated Voltage	24VDC
Power Consumption	1.5A MAX
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66
Certifications	      

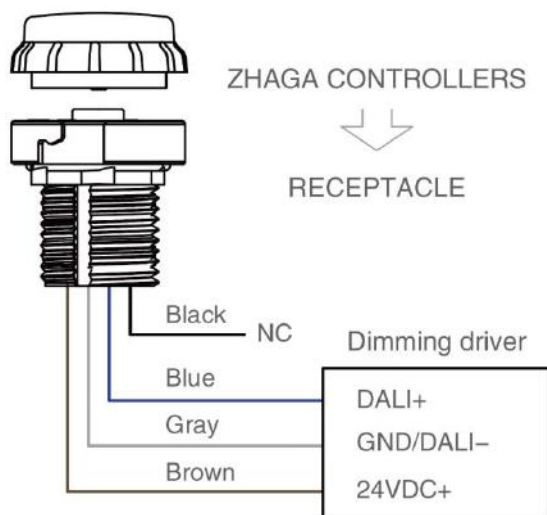
*Conductor specification: # 20 conductor has UL certification

Line color definition

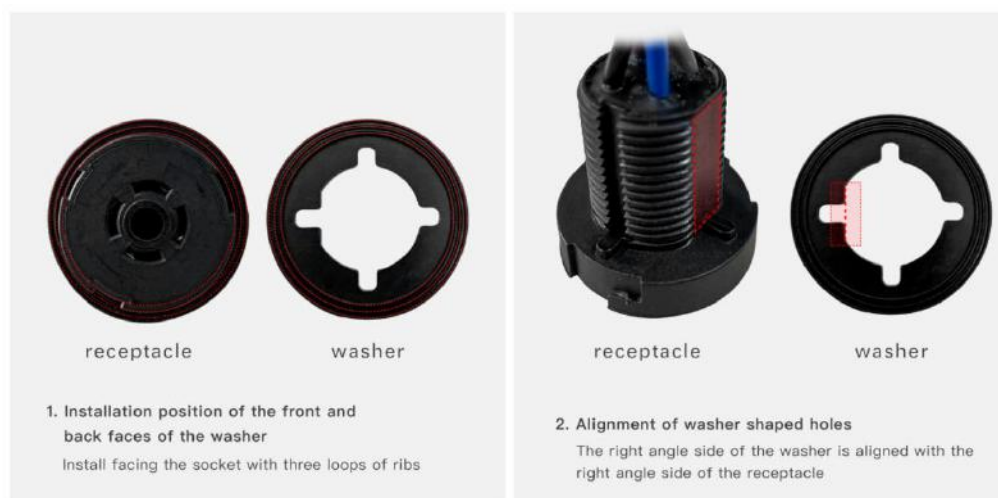
* Default Version

- Port 1 (Brown): 24Vdc
- Port 2 (Gray): DALI (or DALI based protocol) – /common ground
- Port 3 (Blue): DALI (or DALI based protocol) +
- Port 4 (Black): General I/O

Wiring diagram



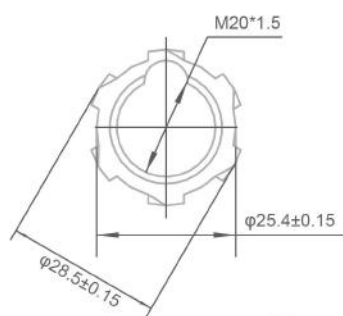
Precautions for installation of gaskets for Zhaga socket products



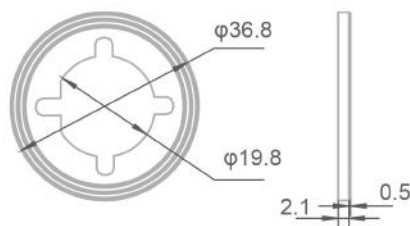
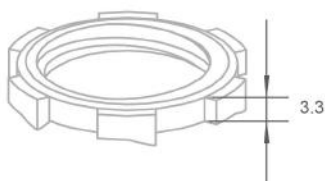
Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



Zinc nut



Small washer

JL-770L

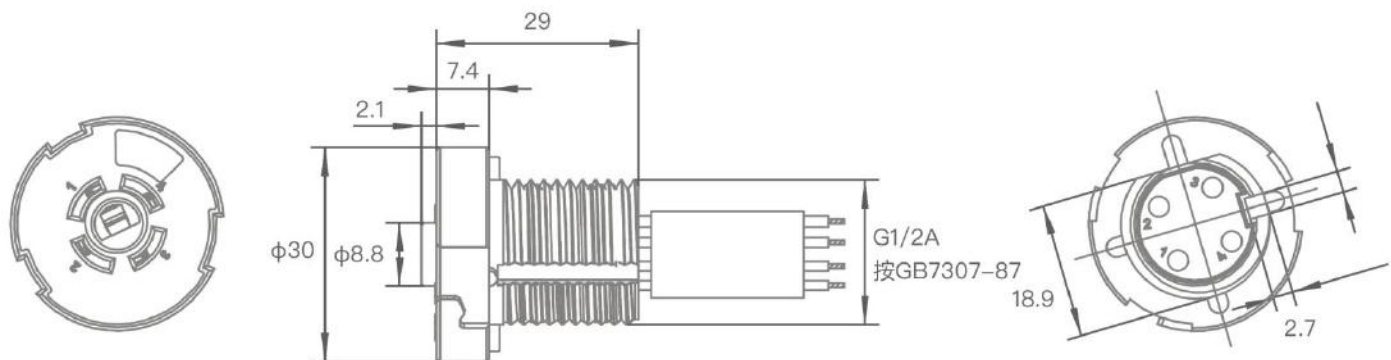
Class Zhaga Book-18 lock socket (cable version)



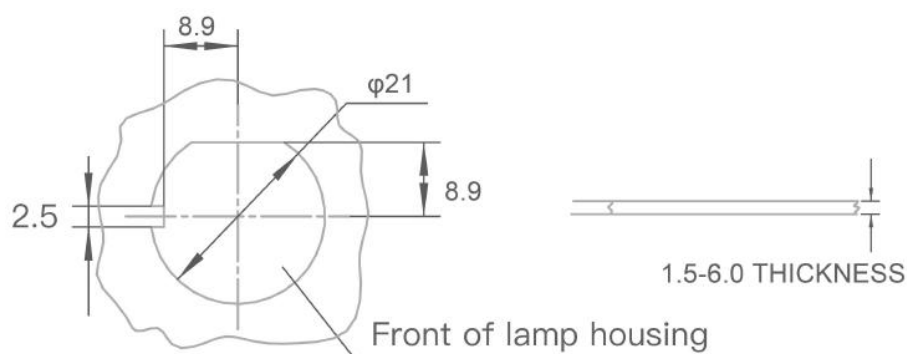
Product Summary

Similar to Zhaga Book-18 standard, JL-770L socket is suitable for 0-10V dimming scheme, which is convenient for developing standard equipment suitable for road lighting, regional lighting or residential lighting.

According to the equipment arrangement, these equipment can adopt monitoring, communication, control and other functions based on 0-10V dimming.



Drilling plan



BENEFITS

- Cable (red, yellow, purple and black)
- Compact size allowing greater flexibility in luminaire design
- Advanced sealing to achieve IP66 with no mounting screws
- Scalable solution allows use of Ø40mm photocell and Ø80mm LEX-M in a central management system with the same connection interface
- Flexible mounting position, upwards, downwards and sideways facing
- Integrated single gasket that seals to both luminaire and module that minimizes assembling time

Specifications

Model No.	JL-770L
Rated Voltage	24VDC
Related Humidity	96%
Ambient Temperature	-40°C ~ +70 °C
*Wires	AWM 1015,18/20/22 AWG,105°C AWM 1007,18/20/22 AWG,80°C
IP	IP66
Certifications	     

*Conductor specification: # 20 conductor has UL certification

Line color definition

* Default Version

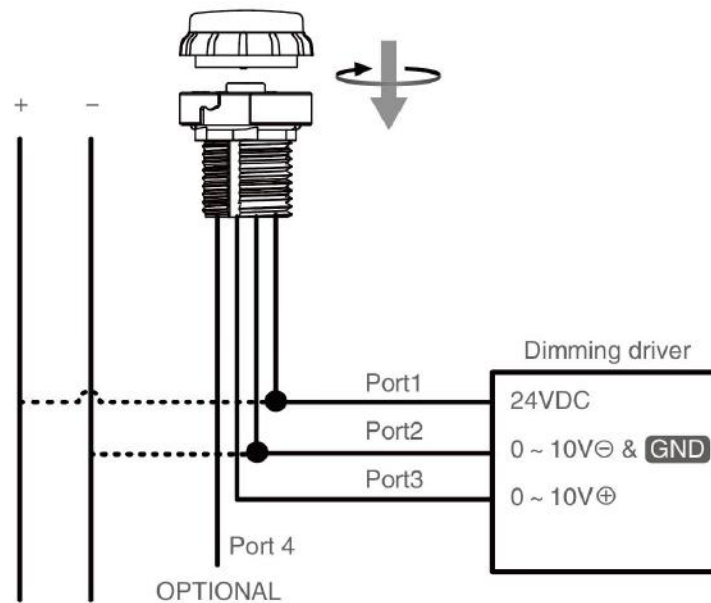
-Port 1 (Red): 24 VDC

-Port 2 (Black): 0-10V – / GND

-Port 3 (Purple): 0-10V+

-Port 4 (Yellow): reserved I / O

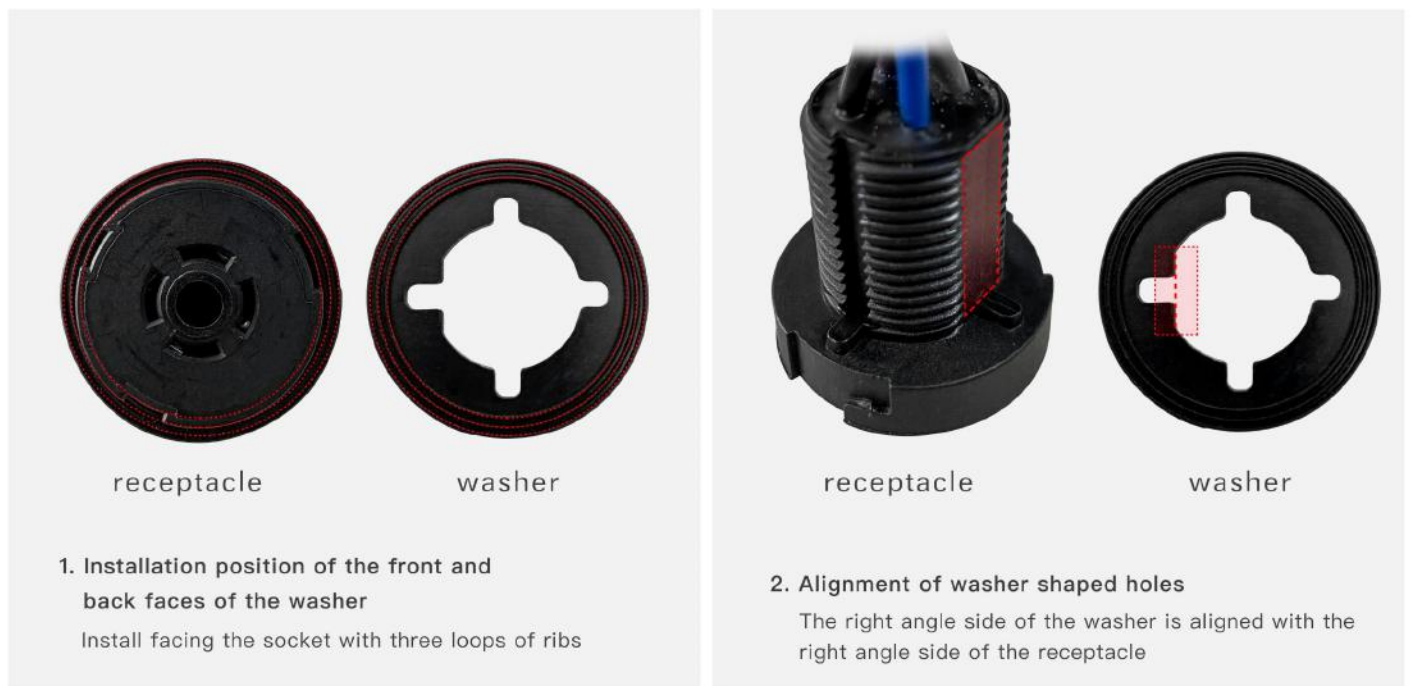
Wiring diagram



If the drive has no auxiliary power supply, an external power supply is required, It is recommended to use JL-770 built-in power socket

*If the light controller is a non-standard product, please define the specific wiring according to the light controller pin

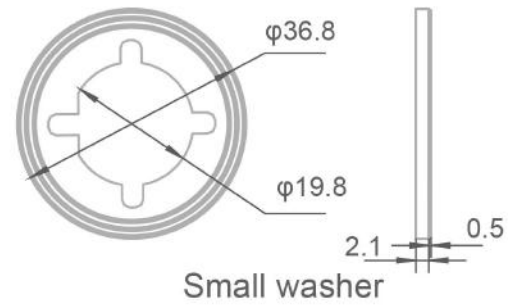
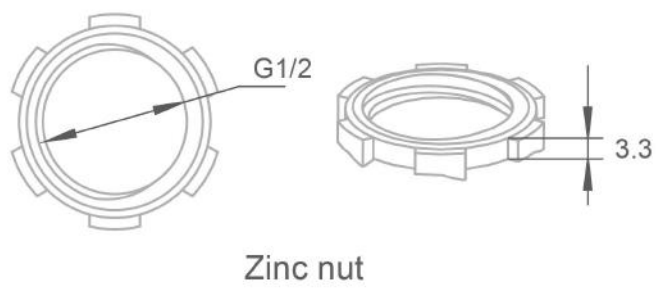
Precautions for installation of gaskets for Zhaga socket products



Installation completion effect

Note: Improper installation of washer can lead to substandard waterproof grade of receptacle.

Assemblies



JL-710

Zhaga Book-18 Receptacle



Model selection table

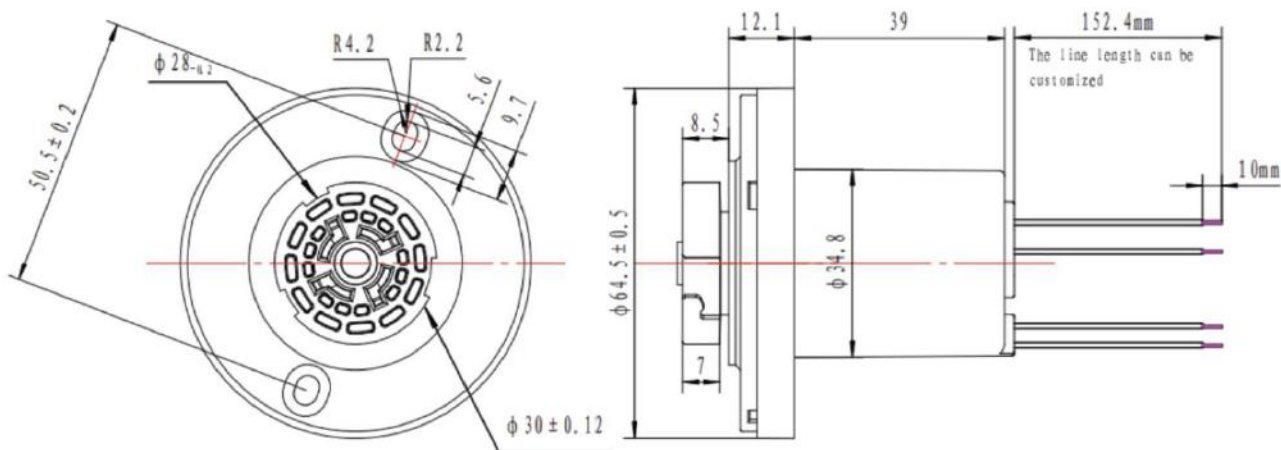
Model	Surge protective ability	IP	Other functions	Remarks
JL-710	< 1Kv	IP66	All the same	
JL-710M*	≤4Kv	IP66		
JL-710S*	< 1Kv	IP68		
JL-710MS*	≤4Kv	IP68		

“*” : In development, minimum specification capacity estimation

FEATURES

The JL-710 product is a socket developed based on the ZHAGA BOOK18 interface size standard. It has a built-in AC-DC switching power supply, witch can output 24VDC/5W.

It can solve the application scenario of the customer driver without auxiliary voltage output to the ZHAGA light controller, and the cost is much lower than replacing a dimming driver with auxiliary voltage output.



Specifications

Input	Input voltage	*Rated: 120~277VAC Limited: 85~305VAC
	Input frequency range	*50/60Hz
	Maximum steady-state input AC current	30mA (full load, 220VAC)
	Cold start surge current (I^2t)	0.009A ² s (full load, 220VAC)
	Efficiency	80% (full load, 220VAC)
Output	Output voltage	24VDC
	Accuracy	±2%
	Rated current	0.21A
	Rated power	5W
	Ripple	100mVp-p
	Nose	150mVp-p
	Linear adjustment rate	±0.12%
	Load adjustment rate	±5%
	Start-up time	< 340mS
	Start-up overshoot voltage	< 5%

	No load power consumption	< 0.12W
Protection	Output undervoltage protection	Hiccup mode, automatic recovery after abnormal removal
	Output overvoltage protection	
	Output overcurrent protection	
	Output short circuit protection	
	Output open circuit protection	
	Over temperature protection	
Environment	Operating Temperature	-40°C~70°C
	Storage Temperature	-40°C~85°C
	Operating Humidity	5%RH~99%RH
	Storage Humidity	5%RH~99%RH
Others	Shell material	PBT
	IP level	IP66 (When used with our light controller)
	Mechanical vibration	IEC60068-2-6
	Flammability Level	UL94-V0
	MTBF	≥80000h
	Weight	85g
Certification		  

* Real rated voltage range: 100~277VAC

* Real input frequency range: 47~63Hz

Structure

- Standardized interface defined in Zhaga Book-18
- Support top/side/bot installation
- Compact size allowing greater flexibility in luminaire design
- Low cost
- 85~305VAC input
- CLASS II driver
- No-load power consumption $\leq 0.12\text{W}$
- Overvoltage/undervoltage/overcurrent/short circuit/open circuit/over temperature protection
- 0~10V dimming transfer interface
- P66 (When used with our light controller)
- RoHS and UL certification

Front pin definition

PIN	Definition	Type
1	24VDC	DC Power output
2	GND	DC Power output
3	NC	Float
4	0-10V	Dim+ input

Note: That is the pin definition of the front socket, and the docking party is the light controller (foolproof socket).

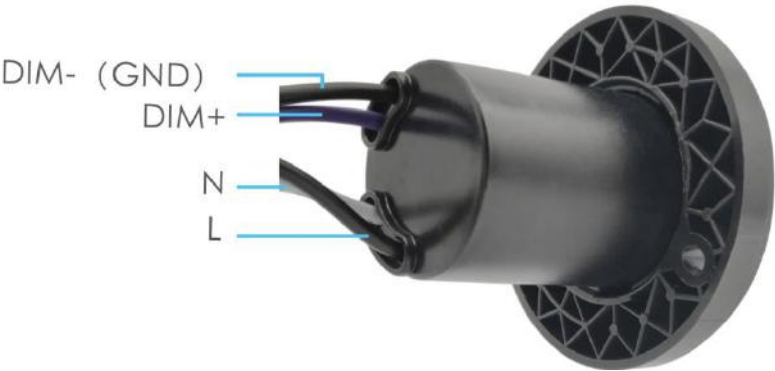


Definition of tail cable

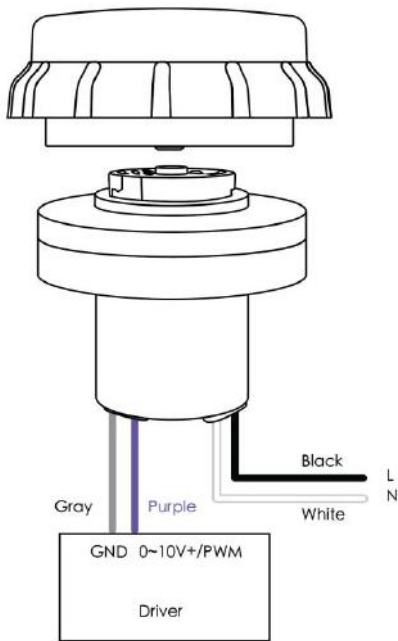
Color	Definition	Type
Black	L	AC power input
White	N	AC power input
Purple	DIM+	DIM+ output
Gray	DIM- (GND)	DIM+ output

Note: That is the definition of the cable on the back, the docking party is the dimming driver and the AC input.

DIM+ usually refers to 0~10V+.

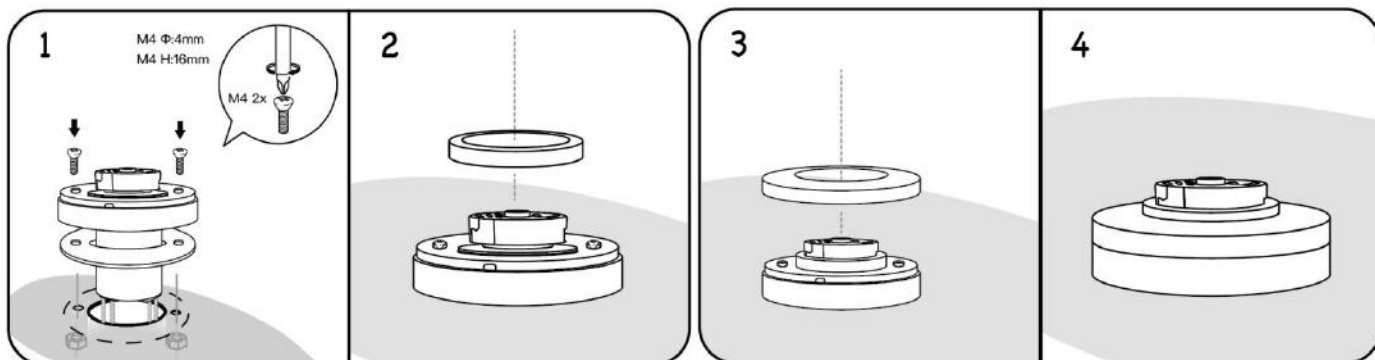


Wiring Diagram



Installation

The opening size is completely equivalent to the standard NEMA socket, so the lamp can be opened according to the original NEMA socket drawing, and the lamp with the NEMA socket hole can also be directly installed on the JL-710 socket. JL-710 supports top/side/upside-down installation, and can achieve IP66 protection on any installation surface.



The effect picture of the light controller installed on the top surface



The effect picture of the light controller installed on the bot surface

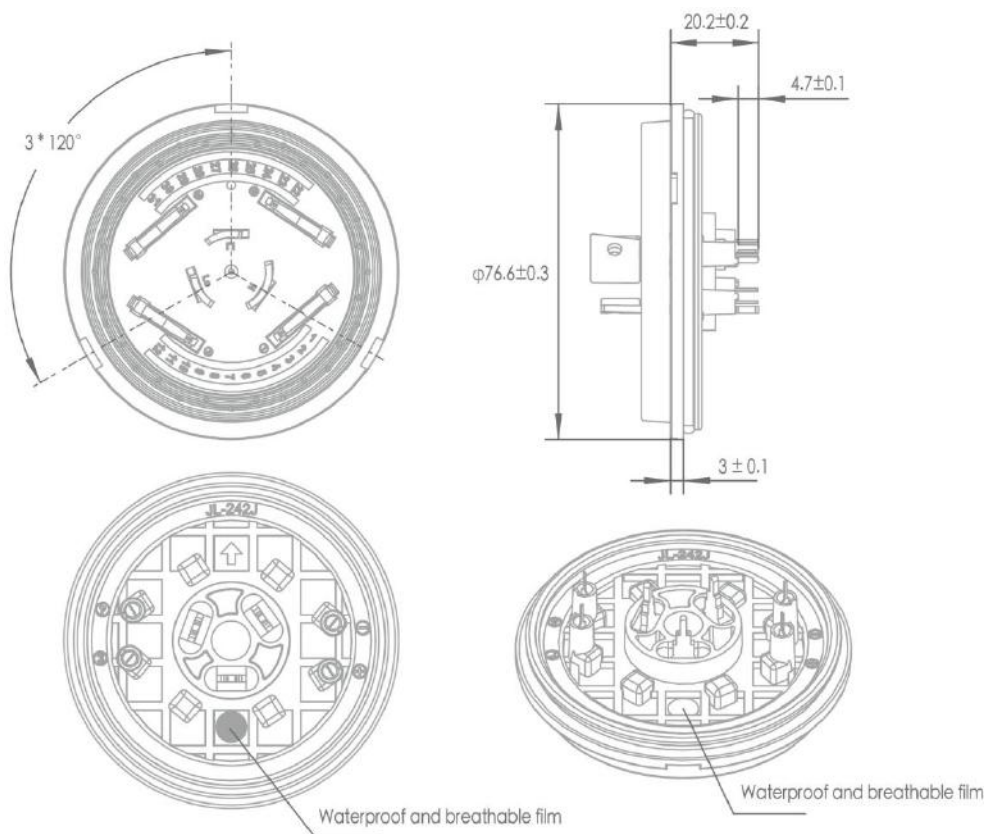
Product image



Product Summary

Shanghai Longjoin Wireless Single Lamp Controller Housing Kit is based on 5pin and 7pin NEMA interfaces, and is mainly used for lighting energy-saving control and other built-in electronic controller products. The power connection adopts standard NEMA plugs, which are rotationally locked; The signal connection uses gold plated shrapnel to ensure stable transmission and achieve intelligent control of lighting equipment.

Product Line Draft



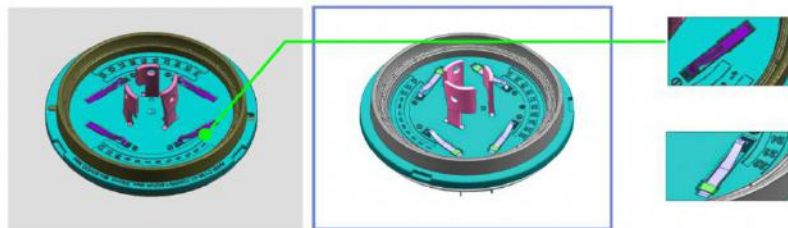
Specifications

Model No.	JL-242JV
Rated Voltage	Max 480Vac
Rated Frequency	50/60Hz
Rated Loading	15A
Signal Control	0-30 VDC, 250 mA Max
IP	IP66 (Reachable after assembly)
Material Quality	PBT
Ambient Temperature	-40°C ~ + 70°C

Comparison of Base Upgrades

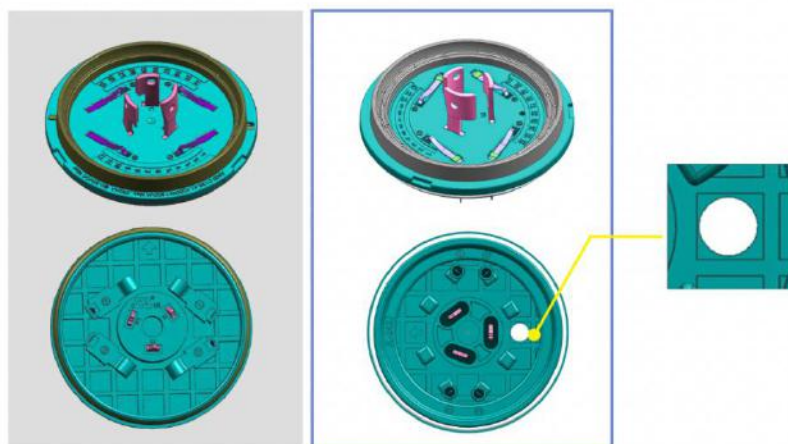
JL-241J

JL-242JV



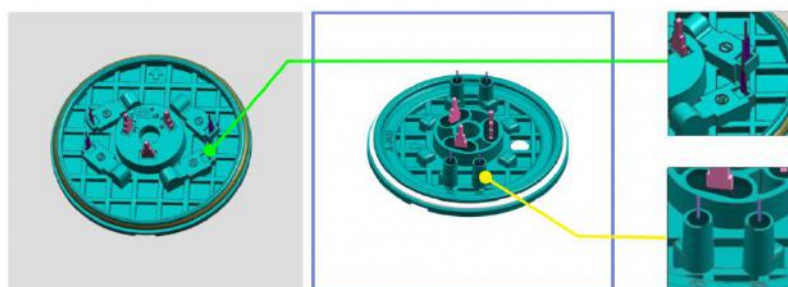
1. Optimization purpose

Install a card bridge to avoid shrapnel distortion



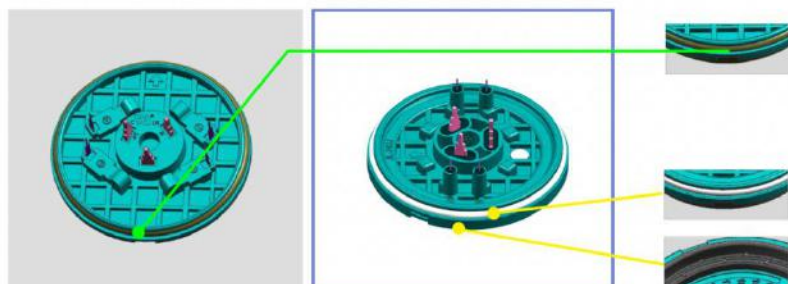
2. Optimization Purpose

Add waterproof and breathable film, balance the pressure difference between the interior and exterior of the light controller, and reduce the risk of water ingress.



3. Optimization Purpose

The cylindrical structure can protect the pins and avoid pin deformation, and the height of the cylinder Flush with the upper shoulder of the lead out end to support the circuit board and ensure the circuit
The board is flat. All pin ends are treated with glue.



4. Optimization Purpose

·The waterproof ring material has been changed to silicone rubber, which has good resistance and can. To extend the service life of the gasket.
·Replace the bottom gasket material with silicone rubber.



Other structural optimizations

Other subtle differences in structure are due to mold optimization considerations and process processing considerations.