Durable Lighting Made for Industrial Safety

Hazardous Location LED Luminaire

B Series (Zone 1, 2, 21, 22)

VENAS

Venas International Co., Ltd

B2

B

B3

B4

Convex Glass
(Optional)

Globe Glass with Wire Guard
(Optional)

Product Description

The B Series LED luminaire is the ideal choice for marine and hazardous applications. They can be used in locations where moisture, dirt, dust, corrosion and vibration may be present, or areas where wind, water, snow or high ambient can be expected.

Features

- 0-10V dimming
- High luminous efficacy - Up to 140 lumens per watt
- Compact and robust structure, excellent reliability
- Various installation ways for different applications
- Great impact resistance with IK08/IK10 certified

VENAS

Compliance

ATEX Standard:
⟨Ex⟩ II 2 G Ex eb mb IIC T6...T4 Gb
⟨Ex⟩ II 2 D Ex tb IIIC T80°C...T100°C Db

IECEx Standard:
Ex eb mb IIC T6...T4 Gb
Ex tb IIIC T80°C...T100°C Db

Zone 1&2, Zone 21&22
CB (Ref. Certif. No.: DE 2-038462-M1)
NSF
Ta. -40°C~+65°C
1000 hours salt spray
IP66 (according to IEC 60079-0)/IP67
IK08 (glass cover)
IK10 (with wire guard)
5G vibration

Application

- Power Plants
- Heavy Industrials Storage Facility
- Paper mills
- Wastewater Treatment Plants
- Loading Docks Platforms
- Offshore Environments
- Chemical Processing Facility
- Petrochemical Processing Facility
- Metallurgical Industry
- Coal Mine
- Food and Alcohol industry

Warranty

5-Year Standard Warranty
LED lumen Maintenance: L70> 150,000 Operation Hours@55°C

Technical Parameter

● Electrical

Specification	EX-20W-B2 YZDAF	EX-40W-B2 YZDAF	EX-60W-B YZDAF	EX-80W-B YZDAF
Rated Power	20W	40W	60W	80W
Input Voltage	200-250VAC			
Input Frequency	50/60Hz			
Power Factor	> 0.95			
Emergency	No emergency function			

● Optical

Specification	EX-20W-B2 YZDAF	EX-40W-B2 YZDAF	EX-60W-B YZDAF	EX-80W-B YZDAF
Lumen Output	3023lm	5,600lm	8,400lm	11,200lm
Lumens Per Watt	148lm/W	140lm/W	140lm/W	140lm/W
CCT	2200K-7000K			
CRI	> 70			
Beam Angle	40°/45°/60°/90°			
Dimming	0-10V dimming			

● Environmental

Specification	EX-20W-B2 YZDAF	EX-40W-B2 YZDAF	EX-60W-B YZDAF	EX-80W-B YZDAF
Ambient Operating Temperature	T6: -40°C to +65°C (-40°F to +149°F)	T5: -40°C to +50°C (-40°F to +122°F) T6: -40°C to +40°C (-40°F to +104°F)	T5: -40°C to +45°C (-40°F to +113°F) T6: -40°C to +40°C (-40°F to +104°F)	

● Mechanical

Specification	EX-20W-B2 YZDAF	EX-40W-B2 YZDAF	EX-60W-B YZDAF	EX-80W-B YZDAF
Housing Material	Copper-free aluminum			
Lens	Tempered glass & PC			
Hardware	Stainless steel			
Fixture Color	Gray RAL7040 (Standard)			
Protection	IP66/IP67/IK08 (glass cover)/IK10 (with wire guard)			
Mounting	Wall, Pole, Ceiling, Arm, Stanchion, Hook			
Cable Entries*	Side: 3/4 NPT, M20, M25, 1/2NPT Top: 3/4 NPT, M25			

Cable Entries: For side and top, 3/4 NPT is standard. If others are required, customer needs to indicate when placing an order.

VENAS

Technical Parameter

● Electrical

Specification	EX-100W-B3 YZDAF	EX-120W-B3 YZDAF	EX-150W-B3 YZDAF	EX-200W-B3 YZDAF
Rated Power	100W	120W	150W	200W
Input Voltage	200-250VAC			
Input Frequency	50/60Hz			
Power Factor	> 0.95			
Emergency	Optional			

● Optical

Specification	EX-100W-B3 YZDAF	EX-120W-B3 YZDAF	EX-150W-B3 YZDAF	EX-200W-B3 YZDAF
Lumen Output	16,183lm	16,800lm	23,286lm	28,000lm
Lumens Per Watt	160lm/W	140lm/W	155lm/W	140lm/W
CCT	2200K-7000K			
CRI	> 70			
Beam Angle	40°/45°/60°/90°			
Dimming	0-10V dimming			

● Environmental

Specification	EX-100W-B3 YZDAF	EX-120W-B3 YZDAF	EX-150W-B3 YZDAF	EX-200W-B3 YZDAF
Ambient Operating Temperature	T5: -40°C to +55°C (-40°F to +131°F)	T5: -40°C to +55°C (-40°F to +131°F)	T5: -40°C to +40°C (-40°F to +104°F)	T5: -40°C to +40°C (-40°F to +104°F)

● Mechanical

Specification	EX-100W-B3 YZDAF	EX-120W-B3 YZDAF	EX-150W-B3 YZDAF	EX-200W-B3 YZDAF
Housing Material	Copper-free aluminum			
Lens	Tempered glass & PC			
Hardware	Stainless steel			
Fixture Color	Gray RAL7040 (Standard)			
Protection	IP66/IP67/IK08 (glass cover)/IK10 (with wire guard)			
Mounting	Wall, Pole, Ceiling, Arm, Stanchion, Hook			
Cable Entries*	Side: 3/4 NPT, M20, M25, 1/2NPT Top: 3/4 NPT, M25			

Cable Entries: For side and top, 3/4 NPT is standard. If others are required, customer needs to indicate when placing an order.
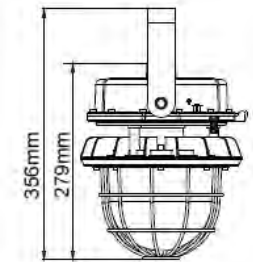
VENAS

Technical Parameter

● Electrical

Specification	EX-250W-B4 YZDAF	EX-300W-B4 YZDAF	EX-350W-B4 YZDAF	EX-400W-B4 YZDAF
Rated Power	250W	300W	350W	400W
Input Voltage	200-250VAC			
Input Frequency	50/60Hz			
Power Factor	> 0.95			
Emergency	Optional			

● Optical

Specification	EX-250W-B4 YZDAF	EX-300W-B4 YZDAF	EX-350W-B4 YZDAF	EX-400W-B4 YZDAF
Lumen Output	35,000lm	42,000lm	49,000lm	65,163lm
Lumens Per Watt	140lm/W	140lm/W	140lm/W	158lm/W
CCT	2200K-7000K			
CRI	> 70			
Beam Angle	40°/45°/60°/90°			
Dimming	0-10V dimming			

● Environmental

Specification	EX-250W-B4 YZDAF	EX-300W-B4 YZDAF	EX-350W-B4 YZDAF	EX-400W-B4 YZDAF
Ambient Operating Temperature	T6: -40°C to +40°C (-40°F to +104°F)	T6: -40°C to +40°C (-40°F to +104°F)	T5: -40°C to +30°C (-40°F to +86°F)	T5: -40°C to +30°C (-40°F to +86°F)

● Mechanical

Specification	EX-250W-B4 YZDAF	EX-300W-B4 YZDAF	EX-350W-B4 YZDAF	EX-400W-B4 YZDAF
Housing Material	Copper-free aluminum			
Lens	Tempered glass & PC			
Hardware	Stainless steel			
Fixture Color	Gray RAL7040 (Standard)			
Protection	IP66/IP67/IK08 (glass cover)/IK10 (with wire guard)			
Mounting	Wall, Pole, Ceiling, Arm, Stanchion, Hook			
Cable Entries*	Side: 3/4 NPT, M20, M25, 1/2NPT Top: 3/4 NPT, M25			

Cable Entries: For side and top, 3/4 NPT is standard. If others are required, customer needs to indicate when placing an order.

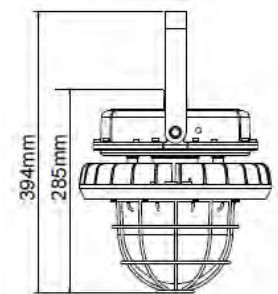VENAS

Product Dimensions

B2

Without drop lens:
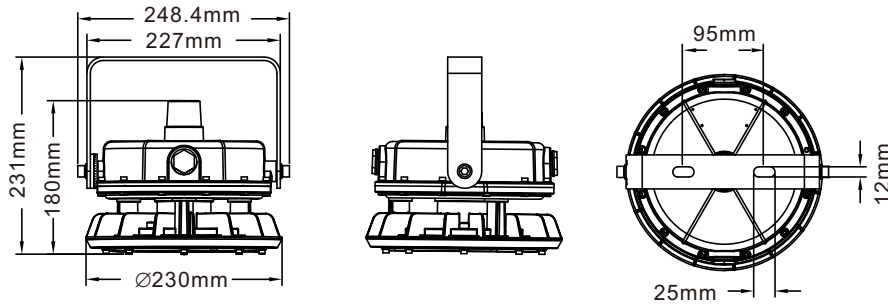
248.4mm
227mm
231mm
180mm
Ø230mm

95mm
12mm
25mm

With drop lens:

356mm
279mm

B

Without drop lens:

157mm
Ø270mm

266mm
129mm

Ø270mm
11mm
30mm
70mm
160mm

With drop lens:

394mm
285mm

B3

Without drop lens:

197mm
Ø370mm

Ø370mm

Ø370mm

With drop lens:

478mm
374mm

B4

Ø480mm

390mm

VENAS

Cable Entries

Compatible with NPT1 thread with an adapter

Top: 3/4 NPT (standard), M25

Wire outlet
Side: 3/4 NPT (standard), M20, M25, 1/2NPT

Wire outlet
Side: 3/4 NPT (standard), M20, M25, 1/2NPT
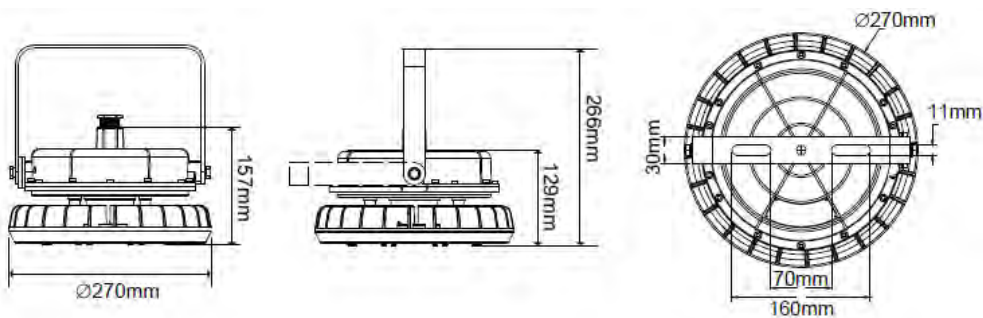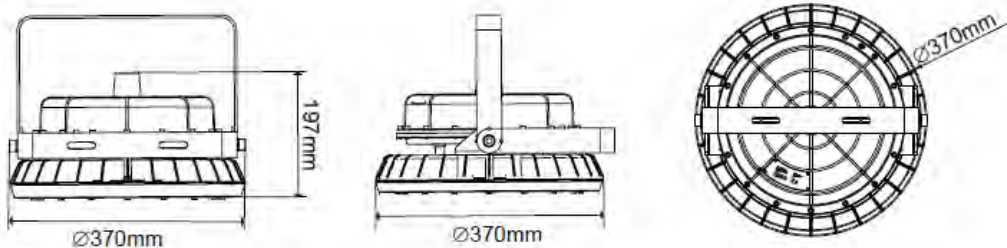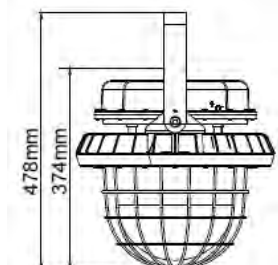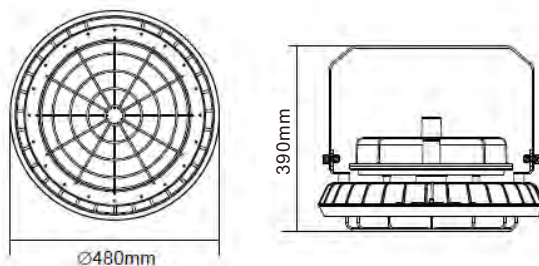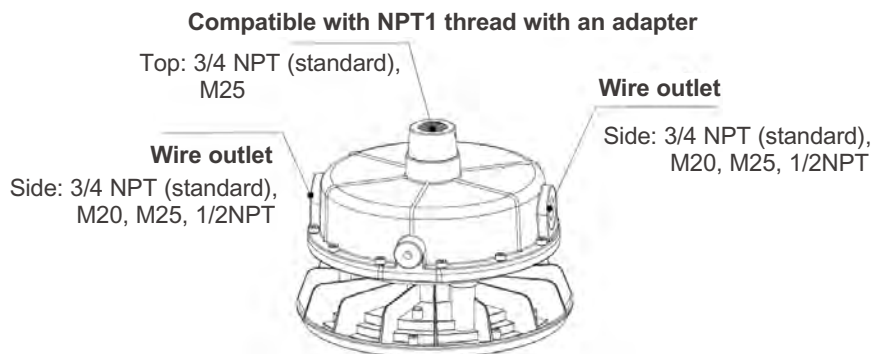
• Packing Information

Model	Net Weight*	Gross Weight*	Quantity/Carton	Package Dimensions (LxWxH)
EX-XXXW-B2 YZDAF	3.5kg	5.0kg	1 pc	360x354x260mm
EX-XXXW-B YZDAF	4.4kg	5.5kg	1 pc	386x330x220mm
EX-XXXW-B3 YZDAF	8.2kg	10.5kg	1 pc	480x460x265mm
EX-XXXW-B4 YZDAF	17.0kg	19.5kg	1 pc	572x572x291mm

Please note that net weight and gross weight may be subject to change because of actual configuration.

Ordering Guide

EX - XXXW - B/B2/B3/B4 Y Z D A F
1   2   3   4 5 6 7 8

1. Model Series	2. Wattage	3. Product Code	4. Dimmable Optinal
Explosion-proof Light	**B2: 20/40W** **B: 60/80W** **B3: 100/120/150/200W** **B4: 250/300/350/400W**	**B** **B2** **B3** **B4**	**Y: Dimmable** **N: Non-dimmable**

5. Color Temp.	6. Beam Angle	7. Glass Type	8. Optional
22=2200K, **30=3000K,** **…,** **70=7000K**	**D40=40°** **D60=60°** **D90=90°** **D120=120°**	**A=blank: flat glass** **A=C: Drop lens & wire guard**	**F: for food zone or blank**

Photometric

40 Degree

—/+180
-150   150
-120   120
-90   90
0
4000
8000
12000
16000
20000
-60   60
-30   30
0

— C0/180,45.1°
— C30/210,43.7°
— C60/240,46.0°
— C90/270,46.9°

60 Degree

—/+180
-150   150
-120   120
-90   90
0
1400
2800
4200
5600
7000
-60   60
-30   30
0

— V 0.0° plane,61.7°
— H 0.0° plane,63.4°

90 Degree

—/+180
-150   150
-120   120
-90   90
0
3000
6000
9000
12000
15000
-60   60
-30   30
0

— C0/180,81.8°
— C30/210,81.2°
— C60/240,82.4°
— C90/270,82.7°

120 Degree

—/+180
-150   150
-120   120
-90   90
0
1200
2400
3600
4800
6000
-60   60
-30   30
0

— C0/180,111.2
— C30/210,111.1
— C60/240,111.3
— C90/270,111.1

Add.: Unit 0126, Beverley Commercial Centre, 87-105 Chatham Road South, Tsim Sha Tsui, Kowloon, Hong Kong.
Contact: sales@venasinternational.com
Website: www.venasinternational.com
Page 9

VENAS

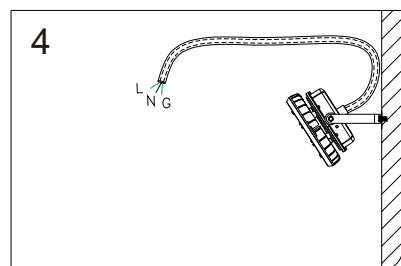## Mounting Methods

● Option 1: Ceiling Mounting
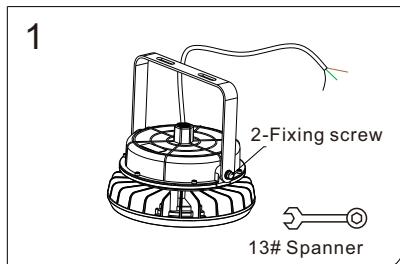
1

2-Fixing screw

13# Spanner

1. Take the fixture and accessory out from carton box, tighten 2x angle holder screw as Fig.1.

2

Flexible metal conduit
3/4 NPT

3/4 NTP(At least 6x Teeth need to tighten)

2. Install and tighten flexible metal conduit with the fixture.

3

Ø10

140
91

16# Spanner

3. Drill 2x hole as shown in Fig.2, the distance can be 91~140mm, fixing ⌀10 expansion crews and bracket on ceiling.

4

N
G
L

4. Connect black cable to L, white to N, green to grounding.

5

Mounting direction adjustable screw
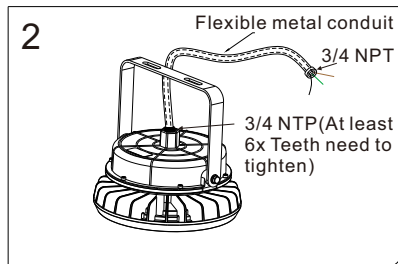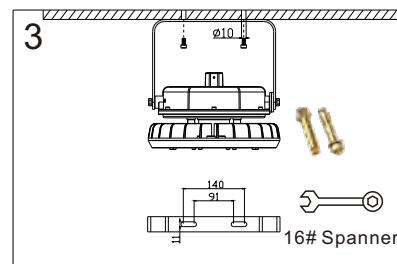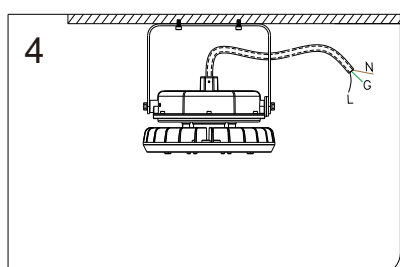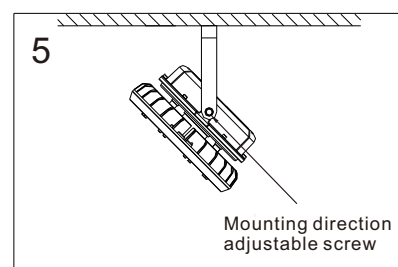
5. Adjust the beam angle from 0-180°.

● Option 2: Wall Mounting
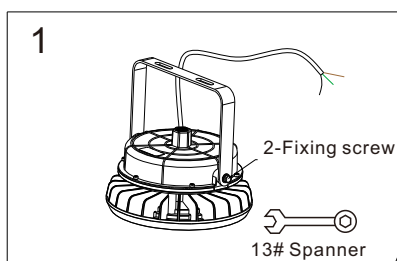
1

2-Fixing screw

13# Spanner

1. Take the fixture and accessory out from carton box, tighten 2x angle holder screw as Fig.1.

2

Flexible metal conduit
3/4 NPT

3/4 NTP(At least 6x Teeth need to tighten)

2. Install and tighten flexible metal conduit with the fixture.

3

16# Spanner

140
91

3. Drill 2x hole as shown in Fig.2, the distance can be 91~140mm, fixing ⌀10 expansion crews and bracket on ceiling.

4

L
N G
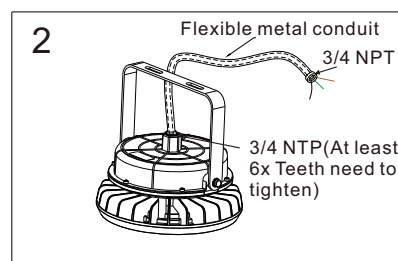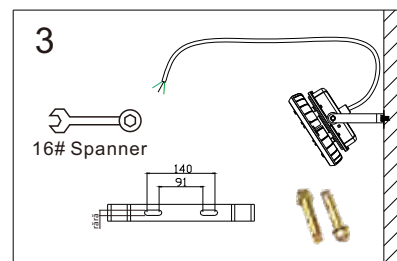
4. Connect black cable to L, white to N, green to grounding.

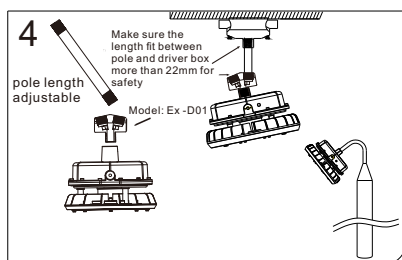## Mounting Methods

● Option 3: Pole Pendant Mounting
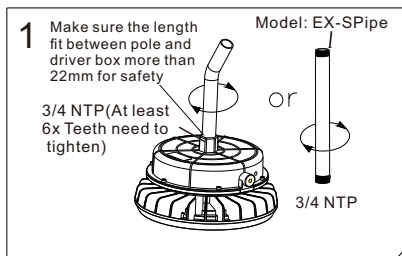
1
Make sure the length fit between pole and driver box more than 22mm for safety

3/4 NTP(At least 6x Teeth need to tighten)

Model: EX-SPipe

or

3/4 NTP

1. Take the fixture and pole accessory out from carton box, tighten pole as shown in Fig.1.

2
4-Ø10.5

N
G
L

Junction box

2. Connect black cable to L, white to N, green to grounding.

3
Junction box

Chain of balance

Expanded crews

100mm

100mm

16# Spanner
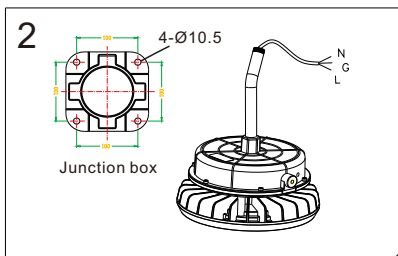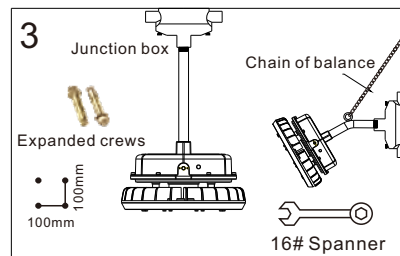
3. Drill 4x ⌀10mm holes, as 100mm distance, install the junction box to the wall or ceiling as shown in Fig.3, tighten the pole to the box, and adjust the chain of balance.

4
Make sure the length fit between pole and driver box more than 22mm for safety

pole length adjustable

Model: Ex -D01

4. Adjustable pole installation. With this adjustable kit, make any light distribution direct as needed. Optional: install the fixture to the long pole after cable connecting.

● Option 4: Hook Pendant Mounting
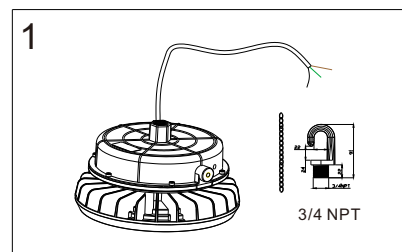
1

3/4 NPT

1. Take the fixture and accessory out from carton box, tighten 2x angle holder screw as Fig.1.

2
The gap should be less than 13mm
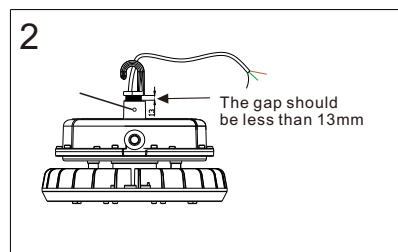
2. Tighten the hook with the fixture, at least 6x teeth need to be tightened, fix the M3 screw to prevent the hook from loosening.

3
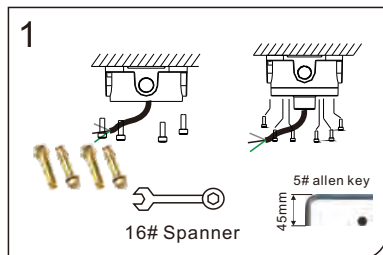Model: EX-Hook
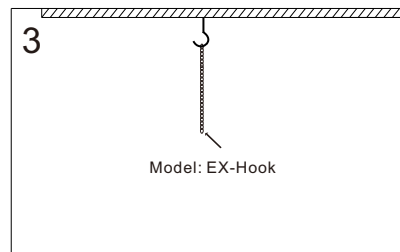
3. Drill 1 expansion screw hole and install it, and hang the chain as shown in Fig.3.

4
L
N
G

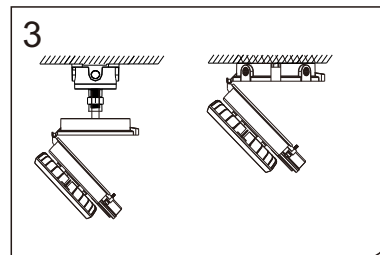4. Connect black cable to L, white to N, green to grounding.

Add.: Unit 0126, Beverley Commercial Centre, 87-105 Chatham Road South, Tsim Sha Tsui, Kowloon, Hong Kong.
Contact: sales@venasinternational.com
Website: www.venasinternational.com
Page 11

VENAS

Mounting Methods

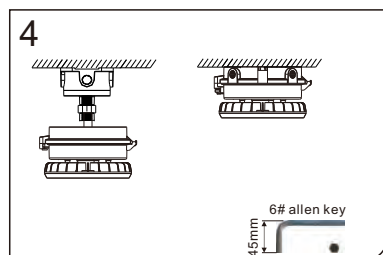## ● Option 5: Ceiling Mounting by Opening Driver Box

1

5# allen key
45mm
16# Spanner

1. Take the fixture and pole accessory out from carton box, tighten pole as shown in Fig.1.

2
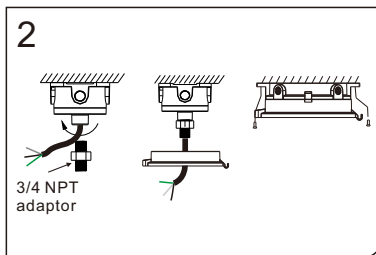
3/4 NPT adaptor

2. Install the 3/4" NPT adapter through the cable to the hole of adaptor, tighten the driver enclosure cover to adaptor via M4 screw to prevent loosening.
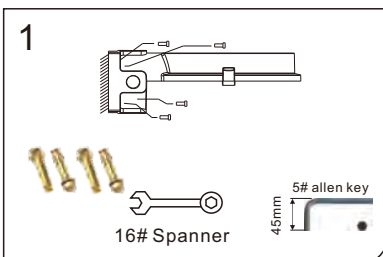
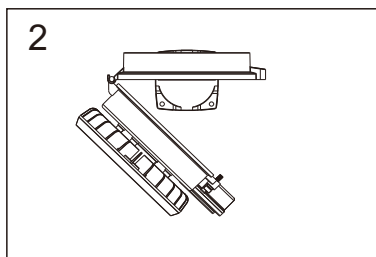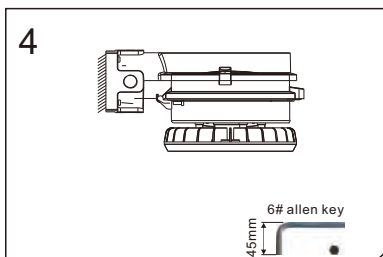**3**

3. Connect black cable to L, white to N, green to grounding.

4

6# allen key
45mm

4. Tighten 3x M8 screws for driver enclosure as shown above.

● Option 6: Arm Mounting by Opening Driver Box (1)

1

5# allen key
45mm
16# Spanner

1. Install the 3/4" NPT adapter through the cable to the hole of adaptor, tighten the driver enclosure cover to adaptor via M4 screw to prevent loosening.

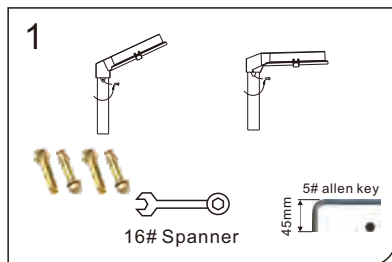**2**

2. Hang the luminaire to the back cover.

3

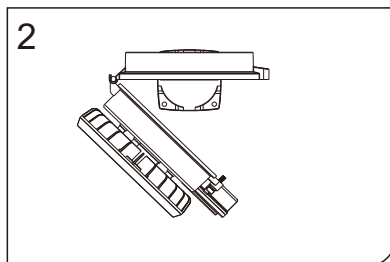3. Connect black cable to L, white to N, green to grounding.

4

6# allen key
45mm

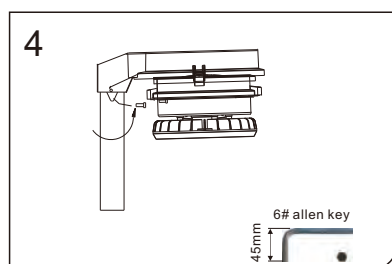4. Tighten 3x M8 screws for driver enclosure as shown above.

VENAS
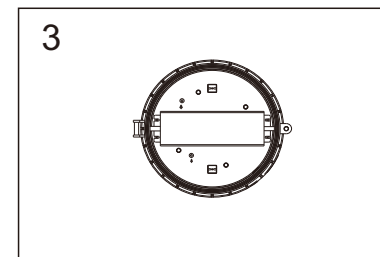
Mounting Methods

• Option 7: Arm Mounting by Opening Driver Box (2)

1

16# Spanner
5# allen key
45mm

1. Install the 3/4" NPT adapter through the cable to the hole of adaptor, tighten the driver enclosure cover to adaptor via M4 screw to prevent loosening.

2

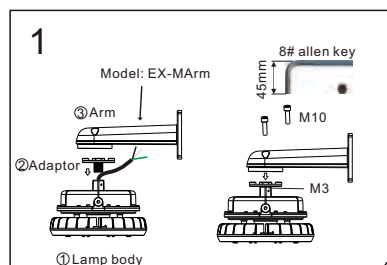2. Hang the luminaire to the back cover.

3

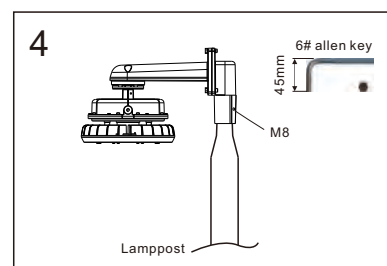3. Connect black cable to L, white to N, green to grounding.

4

6# allen key
45mm
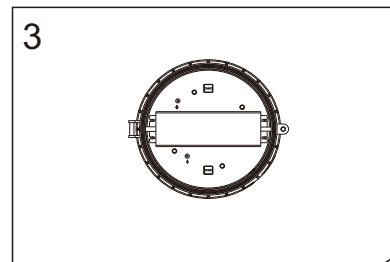
4. Tighten 3x M8 screws for driver enclosure as shown above.

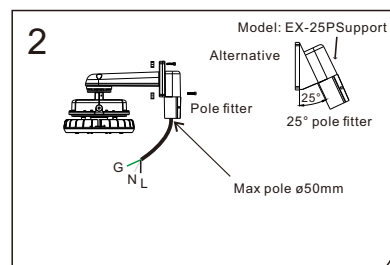### • Option 8: Stanchion Mounting

1

Model: EX-MArm
8# allen key
45mm
③Arm
M10
②Adaptor
M3
①Lamp body

1. Tighten part 2 and assembly 1, fix the M3 screw, install arm to the adaptor, tighten the M10 via 8# allen key.

2

Model: EX-25PSupport
Alternative
25°
Pole fitter
25° pole fitter
G N L
Max pole ø50mm

2. Install the pole fitter with arm via 4x M8 screws, the max suitable pole diameter 50mm, the alternative 25° pole fitter.

3

Model: EX-90PSupport
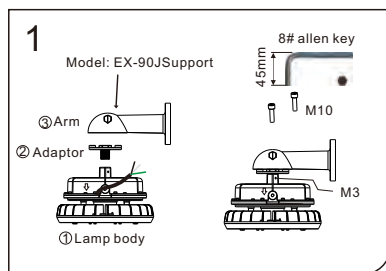G N L
Lamppost
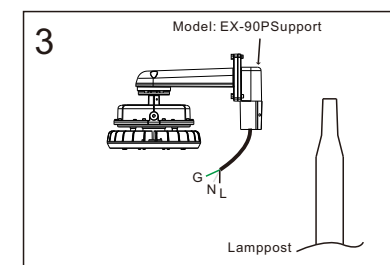
3. Connect the cable to AC wire, black connects to live wire, white to null wire, green to grounding.

4

6# allen key
45mm
M8
Lamppost

4. Slip the fitter to the lamppost and tighten M8 inner hexagonal screw.

VENAS

Mounting Methods

• Option 9: Wall Mounting to Junction Box

**1**

Model: EX-90JSupport

③Arm
②Adaptor
①Lamp body

8# allen key
45mm
M10
M3

1. Tighten part 2 and assembly 1, fix the M3 screw, install arm to the adaptor, tighten the M10 via 8# allen key.

2

Model: Ex-Junction01
100
100

16# Spanner
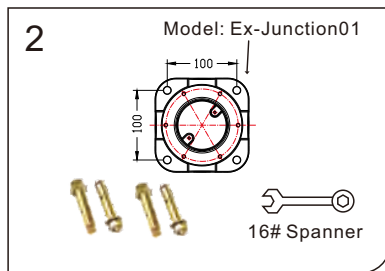
2. Drill 4x 10mm holes. Install the junction box to the wall via M10 expanded screw.

3

L
N
G
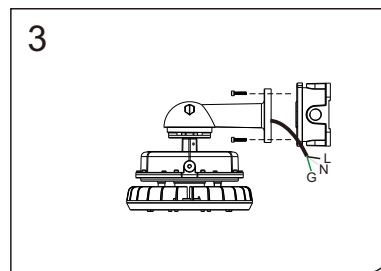
3. Connect the AC wire to power system, black to Live wire, white to Null wire, green to grounding.

4

Model: EX-25JSupport
Alternative: 25° Arm
5# allen key
45mm
100
100
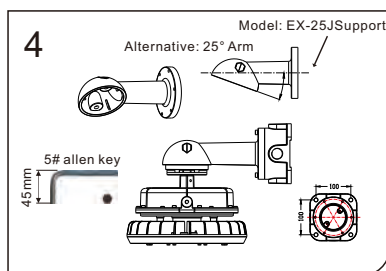
4. Tighten 6x screws between arm and junction box, turn on the power to test the luminaires work.

Accessories

Pole
Ex-Straight Pipe

Hook
Ex-Hook

Pendant Chain
Ex-Straight Chain

Pole
Ex-Bended Pipe

Flexible Tube
EX-NG

Bracket

Junction Box
EX-HD51-KB1

Pendant
Direction Adapter

Stanchion Arm
Ex-MArm

Stanchion Arm
EX-HD51-KYD 90

Pole Support
Ex-25P Support

**Cut-off
Lamp Shade**

Stanchion Arm
EX-HD51-KYD 25

Pole Support
Ex-90P Support

Lamp Shade