

60W Explosion Proof Incandescent Jar Fixture 120V - ATEX/IECEX Rated - Factory Sealed Instruction Manual



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1 General information

1.1 Larson Electronics

9419 US-175
Kemp, Texas
75143

Phone: 1-877-960-2536
Internet: www.larsonelectronics.com
E-mail: sales@larsonelectronics.com

1.2 Further documents

- Spec sheet

For documents and information visit <https://www.larsonelectronics.com/>





1.3 Product Description

The EPL-AEC.EX-MJ-60W-120V-R1-PND Explosion Proof Incandescent Jar Fixture from Larson Electronics is a powerful incandescent lamp for ATEX-rated environments. This 60-watt fixture is compatible with 120V AC and offers 360 degrees of illumination. Constructed of die-cast aluminum alloy with an epoxy resin powder finish, the explosion proof light is factory sealed and compatible with pendant mounting applications.

Explanation of the symbols

2 Explanation of the symbols




2.1 Symbols in these operating instructions

Symbol	Meaning
	Tips and recommendations on the use of the device
	General danger
	Danger due to explosive atmosphere
	Danger due to energised parts



2.2 Warning notes

Warnings must be observed under all circumstances, in order to minimize the risk due to construction and operation. The warning notes have the following structure:

- Signalling word: DANGER, WARNING, CAUTION, NOTICE
- Type and source of danger/damage
- Consequences of danger
- Taking countermeasures to avoid the danger or damage

	DANGER
	Danger to persons Non-compliance with the instruction results in severe or fatal injuries to persons.
	WARNING
	Danger to persons Non-compliance with the instruction can result in severe or fatal injuries to persons.
	CAUTION
	Danger to persons Non-compliance with the instruction can result in light injuries to persons.
NOTICE	
Avoiding material damage Non-compliance with the instruction can result in material damage to the device and / or its environment.	

2.3 Symbols on the device

Symbol	Meaning
	CE marking according to the currently applicable directive.
	According to marking, device approved for hazardous areas.

3 Safety notes

3.1 Operating instructions storage

- Read the operating instructions carefully.
- Store the operating instructions at the mounting location of the device.
- Observe applicable documents and operating instructions of the devices to be connected.

3.2 Safe use

Before mounting

- Read and observe the safety notes in these operating instructions!
- Ensure that the contents of these operating instructions are fully understood by the personnel in charge.
- Use the device in accordance with its intended and approved purpose only.
- Always consult Larson Electronics if using the device under operating conditions which are not covered by the technical data.
- We cannot be held liable for damage to the device caused by incorrect or unauthorised use or non-compliance with these operating instructions.

For assembly and installation

- Observe national assembly and installation regulations (e.g. IEC/EN 60079-14).
- Observe national safety and accident prevention regulations.
- During installation and operation, observe the information (characteristic values and rated operating conditions) on the type plates and data plates and information signs located on the device.
- Before installation, make sure that the device is not damaged.

Maintenance, repair, commissioning

- Before commissioning, make sure that the device is not damaged.
- Work on the device, such as installation, maintenance, overhaul, repair, may only be carried out by appropriately authorised and trained personnel.
- Perform only maintenance work or repair described in these operating instructions.



Function and device design

3.3 Intended use


These light fittings are equipment

- for lighting areas, work spaces and objects
- can be used indoors and outdoors
- for stationary mounting
- for use in Zones 1, 21, 2, 22 and in the safe area

3.4 Modifications and alterations

	DANGER
	Explosion hazard due to modifications and alterations to the device! Non-compliance results in severe or fatal injuries. <ul style="list-style-type: none"> • Do not modify or alter the device.
	No liability or warranty for damage resulting from modifications and alterations.

4 Function and device design

	DANGER
	Explosion hazard due to improper use! Non-compliance results in severe or fatal injuries. <ul style="list-style-type: none"> • Use the device only in accordance with the operating conditions described in these operating instructions. • Use the device only for the intended purpose specified in these operating instructions.

Function

Application range

The pendant light fittings are used as equipment for lighting surfaces, work equipment and objects.

They can be used indoors and outdoors.

The light fitting is approved for use in hazardous areas of zones 1, 2, 21 and 22.

5 Technical data

Technical Data

EPL-AEC.EX-MJ-60W-120V-R1-PND ATEX Rated Incandescent Lamp Listing:

Europe, International **Lamp Technology: Incandescent**

Dimensions: -

Weight: -

Voltage: 120V AC

Total Watts: 60W

Lumens: 1,080 lms

Beam Angle: 360°

Lamp Base: E27

Amps: 0.5A @ 120V

Ambient Operating Temp Range: -20°C to +40°C

Housing Material: Die-cast Aluminum Alloy w/ Epoxy Resin Powder Finish

Lens Material: Borosilicate Toughened Glass

Mounting: Pendant

Terminal: L1 ,N, PE

Cable Entry: (2) M25 x 1.5 - Molded Plastic Cable Gland, Stopping Plug

Ratings/Approvals

Approved for Zone 1 and Zone 2 Approved for Zone 21 and Zone 22 ATEX Ex II 2

GD Ex de III C T80°C Db IEC Ex de II C T6 Gb Ex tb III C T60°C Db EN60079

Certified

IEC60079 Certified

Factory Sealed

Side-mounted Junction Box

Special Orders- Requirements

Contact us for special requirements

Phone: 1-214-616-6180

Toll Free: 1-800-369-6671

Fax: 1-903-498-3364


E-mail: sales@larsonelectronics.com

For further technical data, see www.larsonelectronics.com

6 Transport and storage

- Transport and store the device only in the original packaging.
- Store the device in a dry place (no condensation) and vibration-free.
- Do not drop the device.

7 Mounting and installation

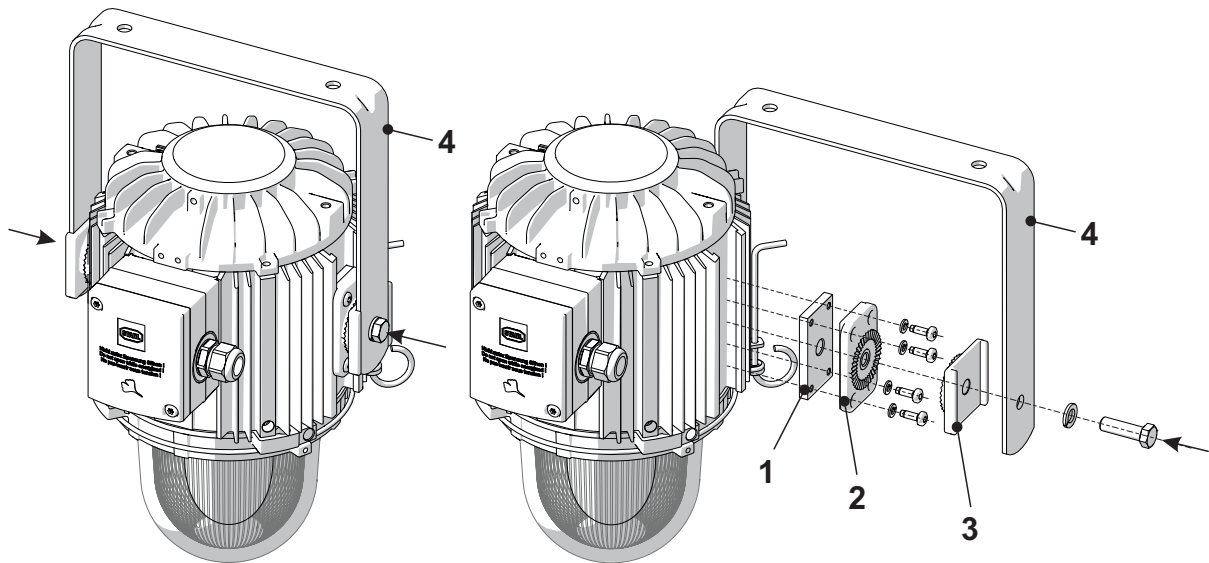
	DANGER
	<p>Explosion hazard due to incorrect installation of the device! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Carry out installation strictly according to the instructions and national safety and accident prevention regulations to maintain the explosion protection. • Select and install the electrical device so that explosion protection is not affected due to external influences, i.e. pressure conditions, chemical, mechanical, thermal and electric impact such as vibration, humidity and corrosion (see IEC/EN 60079-14). • The device must only be installed by trained qualified personnel who is familiar with the relevant standards.

Mounting and installation

7.1 Mounting / dismounting, operating position

7.1.1 Assembly of the Holding Bracket

i	The retaining bracket can be used for wall or ceiling installation.
i	Thanks to the grid's adjustment option, the light fitting can be adjusted in steps of 10° to a maximum of 40°.




- Remove the glass retaining ring.
- Slide the retaining plates (1) into the groove.
- Screw the raster plates (2) into place on the retaining plates using the screws included in delivery.
- Attach the retaining bracket holders (3).
- Apply the retaining bracket (4) and mount it using the screws included in delivery.
- Re-attach the glass retaining ring. The retaining bracket is installed.


7.1.2 Ring Bolt Assembly

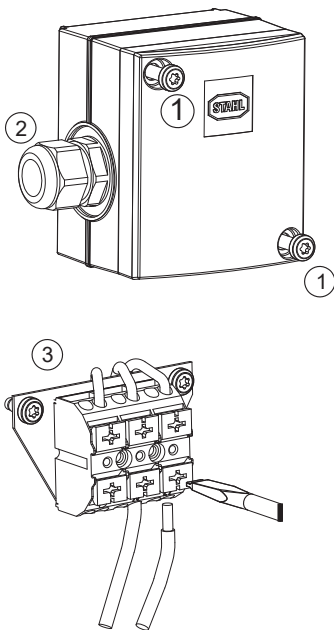
	<ul style="list-style-type: none"> • Screw the ring bolts into the intended threaded inserts. The ring bolts can be used to suspend the light fitting.
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7.2 Installation

	DANGER
	<p>Explosion hazard due to opening the enclosure cover! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • It is prohibited to open the enclosure cover of the luminaire.

7.2.1 Electrical connections

	DANGER
	<p>Explosion hazard due to faulty installation! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only use conductor provided by the manufacturer for explosive areas. • Make sure that the IP protection is preserved after installation. • Comply with the relevant conductor cross-section (1.5 to 4 mm²).

	<ul style="list-style-type: none"> • Loosen the M6 Torx screws (1) and remove the cover. • Loosen cable entry (2) (unscrew approx. 3 rotations). • Insert cable into the terminal box from the outside through the cable entry. • Strip approximately 10 mm of the cable using an appropriate tool. • Unlock the screwless terminals (3) using a screwdriver and insert the cable. Make sure that the conductor insulation is not inserted into the terminal. • Lock cable entry firmly by tightening completely. • Re-attach the cover and close it using the respective screws. The light fitting is now operational.
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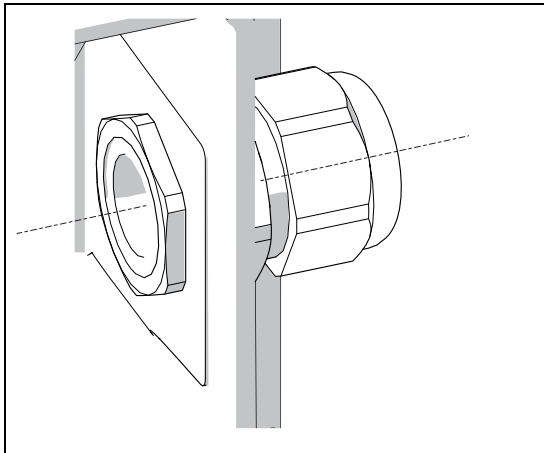
Commissioning

7.2.2 Cable entries

The light fittings are equipped with 2 entry holes. 1 cable entry and 1 stopping plug are screwed in.


The electrical connection into the EX d chamber is implemented with a hermetically sealed M 16 x 1.5 conductor bushing size.

To install additional permitted screw connections, proceed as follows:



- Insert cable entry into the terminal box and tighten with a jam nut from the inside (torque: metal cable gland 3 Nm, plastic screw connection 2 Nm).
- Tighten the cable entry and pressure screw of the cable entry after installation.
- Use a certified stopping plug to seal the opening that is not used.



8 Commissioning

	DANGER
	<p>Explosion hazard due to incorrect installation! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Check the device for proper installation before commissioning. • Comply with national regulations.

Before commissioning, ensure the following:



- Check the mounting and installation.
- Inspect enclosure for damage.
- If necessary, remove foreign bodies.
- If necessary, clean the connection chamber.
- Check if the conductors have been inserted correctly.
- Check if all screws and nuts have been tightened firmly.
- Check if all drilled holes are closed.
- Check whether all the cable entries and stopping plugs have been tightened firmly.
- Check if all conductors have been clamped firmly.
- Check if the line voltage and the rated operational voltage are consistent.
- Check if the permissible conductor diameter for the corresponding cable entries have been used.
- Check if the device is closed according to regulations.

9 Maintenance, overhaul, repair

	CAUTION
	<p>Risk of electric shock or malfunction of the device due to unauthorized work! Non-compliance can result in light injuries!</p> <ul style="list-style-type: none"> • Before carrying out work on the device, switch off voltage supply. • Work performed on the device must only be carried out by authorized and appropriately trained qualified electricians.
	WARNING
	<p>Risk of burns due to hot surfaces! Non-compliance can result in severe injuries and material damage.</p> <ul style="list-style-type: none"> • Allow the housing, the protective glass and the lamp cool down for approx. 15 min before touching them.

9.1 Maintenance

- Consult the relevant national regulations to determine the type and extent of inspections.
- Adapt inspection intervals to the operating conditions.
- Perform maintenance and repair work in accordance with IEC 60079-17 and IEC 60079-19.

	CAUTION
	<p>Danger of electric shock due to energised parts! Non-compliance can result in minor injuries!</p> <ul style="list-style-type: none"> • All connections must be disconnected from the power supply. • Secure the connections against unauthorized switching.
	<p>Observe the relevant national regulations in the country of use.</p>


At a minimum, check the following points during maintenance work on the device:

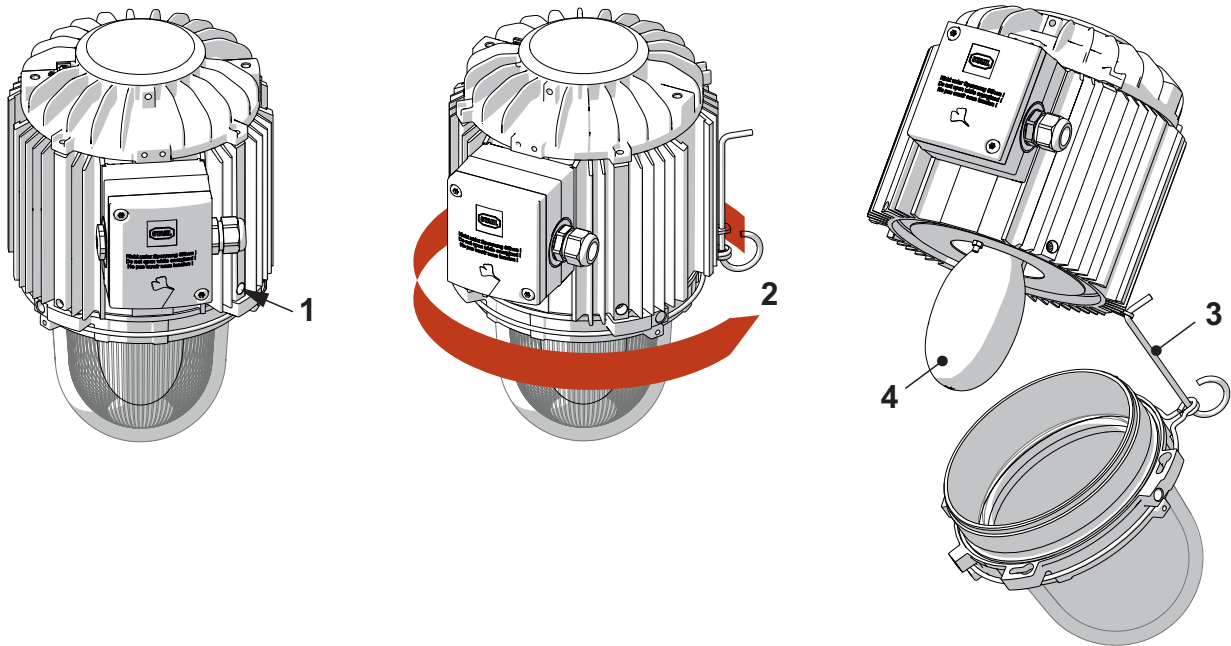
- Proper function of glass dome and housing,
- Condition of the connection lines,
- Connection of the protective conductor and equipotential bonding,
- Proper function and secure fit of cable entries,
- Seals within the cable entries,
- Cleanliness and proper function of the housing interiors (Ex d and Ex e),
- Secure fit of the holding bracket mounting screws,
- Good visual condition of the flameproof joint (dirt or damage)
- Comply with the permissible temperatures (according to EN 60079),
- Intended use and function.

Maintenance, overhaul, repair

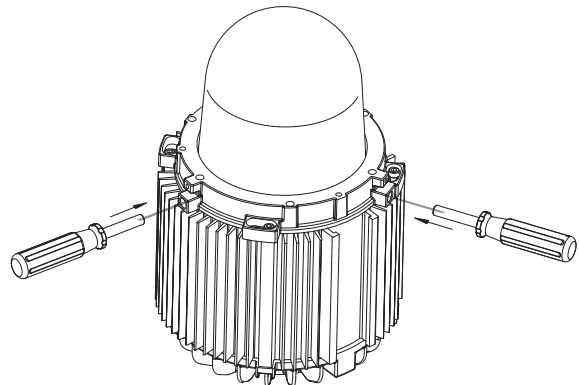
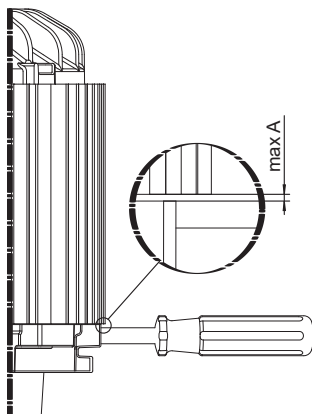
9.1.1 Replacement of lamps

Opening the light fitting

	<p>To facilitate the removal, the glass fixing ring is provided with holes (\varnothing 10.5 mm) where a lever can be mounted to increase the leverage.</p>
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- Loosen the mounting screw (1).
- Loosen the protective glass and the retaining ring (2). The locking pin (3) prevents the protective glass from falling down.
- Unscrew the lamp (4).
- Screw in new lamp.
- Carefully screw the protective glass back on.
- Make sure that the flameproof thread is not damaged.



- Tighten the protective glass using the rotary actuator until the tightness can be guaranteed and the thread gap (A) is ≤ 0.3 mm for size 1 and ≤ 0.5 mm for size 3.
- Tighten the mounting screw. Replacement of the lamp is completed.

9.2 Repair

	DANGER
	<p>Explosion hazard due to improper repair! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Repair work on the devices must be performed only by Larson Electronics.


9.3 Returning the device

- Only return or package the devices after consulting Larson Electronics! Contact the responsible representative from Larson Electronics.

Larson Electronics's customer service is available to handle returns if repair or service is required.

- Contact customer service personally.

10 Cleaning

	DANGER
	<p>Explosion hazard due to damaged joints when cleaning! Non-compliance results in severe or fatal injuries.</p> <ul style="list-style-type: none"> • Only treat corroded joints with high-quality, chemical cleaning agents (e.g. with Esso reducing oils, type Vassol or similar products). • Do not use any abrasives or wire brushes for cleaning. • Do not apply any colour.


- Clean the flameproof joints regularly with an acid-free grease that is compatible with aluminium.

11 Disposal

- Observe national and local regulations and statutory regulation regarding disposal.
- Separate materials when sending it for recycling.
- Ensure environmentally friendly disposal of all components according to the statutory regulations.

12 Accessories and spare parts

NOTICE	
<p>Malfunction or damage to the device due to the use of non-original components. Non-compliance can result in material damage.</p> <ul style="list-style-type: none"> • Use only original accessories and spare parts from Larson Electronics. 	

	<p>For accessories and spare parts, see data sheet on contact Larson Electronics.</p>
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