EX
CERTIFIED

EXIN LIGHT

EX Series User Manual

EX90L T4 IIB 1440 SS / EX90L T4 IIC 2000 SS / EX90L T4 IIIC 2000 SS

Also applies to obsolete models **EX90L T4 IIB 720 DS** & **EX90L T4 IIC 720 SS**

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Standards & Certification

IEC 60079/0:2011
IEC 60079-11:2011
IEC 60079-28:2015
IECEx Certificate number: **IECEx TSA 15.0025X**
ATEX Certificate number: **ITS-I 21 ATEX 29987X** **(Certification Not Current September 2026)**
UKEX Certificate number: **ITS 21 UKEX 0171X** **(Certification Not Current September 2026)**
EX90L T4 IIB 720 DS : **Ex ia op is I Ma and Ex ia op is IIB T4 Ga** **(No longer available)**
EX90L T4 IIB 1440 SS : **Ex ia op is I Ma and Ex ia op is IIB T4 Ga**
EX90L T4 IIC 720 SS : **Ex ia op is I Ma and Ex ia op is IIC T4 Ga** **(No longer available)**
EX90L T4 IIC 2000 SS : **Ex ia op is I Ma and Ex ia op is IIC T4 Ga**
EX90L T4 IIIC 2000 SS : **Ex ia op is I Ma, Ex ia op is IIC T4 Ga and Ex ia op is IIIC T130 Db**

EXIN Light is a division of **Deeps Engineering Pty Ltd.**

All EXIN Light products are manufactured, tested, and assembled by Deeps Engineering at our facility in Salamander Bay, NSW, Australia.

For more information, please visit www.exinlight.com or www.deepsengineering.com.au

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EX Series User Manual

EX90L T4 IIB 1440 SS • EX90L T4 IIC 2000 SS • EX90L T4 IIIC 2000 SS

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The information contained within this Manual is based on the latest information and technical specifications available at the time of printing. EXIN Light reserves the right to make changes to product specifications without notice.

1. Equipment Safety Guidelines

Every year many accidents occur which could have been avoided by a few seconds of thought and adopting a more careful approach when planning a job or simply using equipment. You as the Operator can avoid many accidents or even damage to the equipment by observing and following the precautions and instructions contained in this Manual. The EX Series EXIN Lights are Orange in colour and are designed as explosion-proof products for use in potentially explosive atmospheres.

1) Ensure that all Operators of the EX Series EXIN Lights have fully read and understood this manual prior to setting up, installing, operating or charging the equipment.

2) This equipment is only to be operated by a competent person. Testing Operators for competence and understanding is recommended.

3) Never allow anyone to operate this equipment if under the influence of alcohol or drugs.

4) If the ability of this equipment to carry out its intended function is in doubt then remove it from service and return it to an Authorized Distributor for repair. It is important to note that any servicing, maintenance and repairs of the EX Series EXIN Lights and Battery replacement in the EX Series EXIN Lights be carried out only by an Authorized Service Agent. Failure to do so may result in this product being non-explosion proof and voiding warranty. This includes LED replacement in the EX Series EXIN Lights.

5) When charging from mains power ensure that the charging procedure is adhered to. Never recharge the battery in a flammable or explosive atmosphere.

6) Never allow any person to mount, use or charge this equipment until they have developed a thorough understanding of safety precautions and how the EX Series EXIN Lights operate as they are designed and manufactured as explosion-proof products.

7) The Operator must be aware of the classification of their environment (i.e. explosive gases, flammable atmosphere etc.) to ensure that the EX90L selected meets their required level of classification as an explosion-proof product.

8) In some States, Territories or Work Sites Operator training or equipment documentation may be required. Please check with your local regulatory authority prior to use. It is good safety practice to train all Operators fully on the use of the EX Series EXIN Lights and keep records of this training, including training content. Instructions must be read and understood before operating.

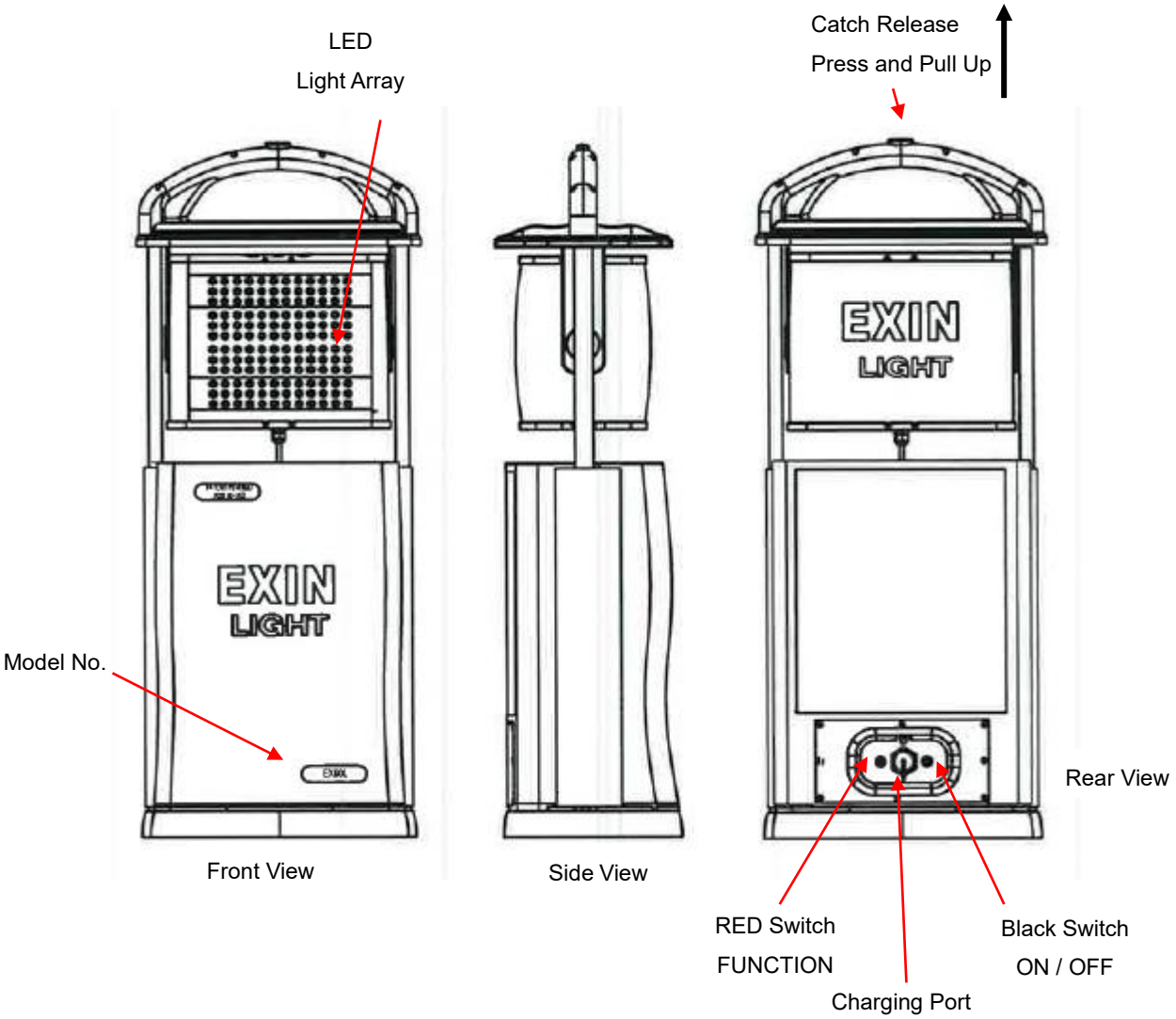
9) All items are to be checked for correct and safe operation and that they are intact and undamaged before using in an explosive atmosphere area.

10) **WARNING:** The EXIN Light Models EX90L T4 IIB 1440 SS, EX90L T4 IIB 720 DS, EX90L T4 IIC 720SS and EX90L T4 IIIC 2000SS with Battery Serial Numbers starting with EX0001 upwards are purpose built and is an encapsulated Ni-MH battery which does not need water or service and is only to be charged in accordance with the instructions provided. The superseded EXIN Light Models EX90L T2 720, EX90L T2 1440 and EX90L T4 720 use a specific brand Lead Acid Battery and must only be replaced by an Authorized Service Agent. No other Battery may be used in the lights unless authorized in writing from the Manufacturer.

Specific Conditions of Use:

1) The LED lens enclosure is sprayed with anti-static coating. Care should be taken to avoid rubbing and contact with organic dissolvent, such as ethanol.
2) The battery should be charged by an assessed SELV charger in a safe area only

2. Part Identification EX Series



WARNING
The EX Series EXIN Lights must be removed from explosive atmospheres and recharged only in a non-explosive, non-flammable atmosphere and non-hazardous environment.

3. Introduction

Thank you for purchasing an EXIN Light by Deeps Engineering. The information contained in this Manual covers charging, setting up, and using the light. This Manual needs to be fully read and understood prior to the light being charged and operated.

The EX Series EXIN Lights have been developed to help with the lighting needs of explosion proof product applications, or portable lighting within areas that require relevant certified products. The EXIN Light removes the need for generators, power extension leads etc.; cutting down set up times and running costs.

When removing the EXIN Light from the packing carton, also remove the protective plastic bag and plastic sheets covering both lenses and dispose in an environmentally correct manner, then follow charging instructions to ensure Battery protection, and that the Battery is in a fully charged condition prior to use.

4. Charging

The EX90L Series EXIN Lights use a purpose built in power supply.

WARNING
The EX Series EXIN Lights must be removed from explosive atmospheres and recharged only in a non-explosive, non-flammable atmosphere, and non-hazardous environment.

- I.e. The EX90L Series EXIN Lights are only to be recharged once they have been removed from the explosive, flammable or hazardous atmosphere.

- The EX Series EXIN Lights can be recharged by a Mains Charger suitable for 100 to 240 volt 50-60Hz supply. The charger should only be used indoors and not exposed to the weather.

Charging Steps:

Step 1. To charge your EXIN Light ensure that it is placed on a firm level surface.
Step 2. Open the lid of the EXIN Light by pushing the button in the middle of the Carry Handle.
Step 3. Raise the Light Head and tilt it forward to its maximum angle (60°).

Step 4. Lift the sealed Storage Lid located inside the body of the EXIN Light.
Step 5. The storage area contains the AC power supply.

Never charge the unit in a hazardous environment
(E.g. a wet environment poses numerous risks including electrocution).

Step 6. Place the relevant end of the Charging Lead into the socket located at the bottom rear of the EX Series EXIN Lights. This socket has a keyway which allows easy entry for the plug, turn the circular collar of the plug clockwise and this will lock the plug into place.
Step 7. Insert the power supply into a 100 to 240 volt AC outlet (*the outlet needs to be on a protected circuit/ circuit breaker/ RCD*).
Step 8. To avoid long term damage to the battery of the EX Series EXIN Lights, it is advised that you do not leave the EX90L on charge for longer than 48 hours after a full recharge has been achieved. *Failure to do so will void your warranty.*
Step 9. When battery is fully charged the EX90L will stop charging.
Please Note: If disconnected from the external power supply and not used for prolonged periods, the battery will start to discharge. You must charge the battery at least once every three (3) months when not in use or being stored.
Step 10. The cap which covers the charge points must be replaced securely prior to re-use of the EX90L Series.

5. Operating Instructions

The Red LED on the rear panel is lit when under normal operation. When setting up the EX Series EXIN Light please:-

Step 1. Ensure that it is placed on a firm level surface.
Step 2. Push the button in the middle of the handle and pull the handle upwards to raise the Light Head to full height.
Step 3. Once you have released the push button in the middle of the handle, you will hear and feel the locking pins go into place, if the handle cannot move up or down you are in the locked position.

5.1 Using the Function Switch of the EX90L T4 IIB 1440 SS

The ON/OFF switch (Black), and the switch for the Light head flash mode (Red) are located on the panel at the back of the unit. Press the Black main power (ON/OFF) Switch to power on the EX90L T4 IIB 1440 SS, this will activate 144 of the 288 LED's (the odd rows; 1,3,5 etc.) in the Light Head, each time you press the Red Function

Switch the functions of the EX90L T4 IIB 1440 SS will change as follows;

- 1st Press- This will activate the opposite 144 LED's (even number rows; 2, 4, 6, etc.)
- 2nd Press- This will activate all 288 LED's
- 3rd Press- This will activate the flash function (also known as SOS mode) of the first 144 LED's
- 4th Press- This will activate the flash function of the of the opposite 144 LED's
- 5th Press- This will activate the flash function of all 288pcs of the LED's
- 6th Press- This will take you back to the beginning of the functions (first 144 LED's only)

The EX series EXIN Lights will flash at a speed of 2 flashes per second.

Please note: The power of the EXIN Light can-not be turned off using the Red Function Switch, you must press the main power (ON/OFF) switch to achieve a complete shutdown.

The red LED will flash when the battery is at a low level and needs charging.

If the red LED is off and the main light is off, then the battery is too low and needs charging.

5.2 Using the Function Switch of the EX90L T4 IIC 2000 SS & EX90L T4 IIIC 2000 SS

The ON/OFF switch (Black), and the switch for the Light head flash mode (Red) are located on the panel at the back of the unit.

- Press the Black main power (ON/OFF) Switch to power up the EX90L T4 IIC 2000 SS or EX90L T4 IIIC 2000 SS, this will activate the Light Head
- Press the Red function switch to activate the flash mode (also known as SOS mode).
- The EX series EXIN Lights will flash at a speed of 2 flashes per second.
- Press the function switch again to return to the original function.

Please note: That the power of the EXIN Light cannot be turned off using the Red Function Switch, you must press the main power (ON/OFF) switch to achieve a complete shutdown.

The red LED will flash when the battery is at a low level and needs charging.

If the red LED is off and the main light is off, then the battery is too low and needs charging.

5.3 Obsolete Models

The obsolete model **EX90L T4 IIB 720 DS** operates the same as the **EX90L T4 IIB 1440 SS** only that instead of half of the single panel being lit, each side will be lit separately.

The obsolete model **EX90L T4 IIC 720 SS** operates the same as the **EX90L T4 IIC 2000 SS** & **EX90L T4 IIIC 2000 SS**.

6. Battery & LED Performance

The Battery life cycle of the EXIN Light is approximately 400 life cycles when charged according to the instructions in this Manual. The Battery is purpose built and is an encapsulated NiMH battery and does not need water or service, only to be charged in accordance with the instructions provided.

The LED Light source has approximately 60,000 life hours when the light is used in accordance with this Manual.

WARNING:

- Never use a non-standard charger for the EXIN Light. This may damage the Light and void your Warranty.
- Never leave the Battery fully discharged; this may permanently damage the Battery.
- The Battery must be stored in a cool, dry environment.
- High temperatures or wet environments will increase the self-discharge rate.
- NiMH Batteries must always be kept in a fully charged condition.
- Check the Battery voltage with a good digital volt meter every 3 months and charge if it falls below 8 volts.
- Since the LED lens enclosure uses anti-static coating, care should be taken to avoid rubbing and contact with organic dissolvent, such as ethanol.

7. Battery Removal

Maintenance, Repairs, Battery and LED replacements of the EX Series EXIN Lights must only be carried out by an Authorized Service Agent.

8. LED Replacement

Maintenance, Repairs, Battery and LED replacements of the EX Series EXIN Lights must only be carried out by an Authorized Service Agent.

9. Specifications

	EX90L T4 IIB 1440 SS	EX90L T4 IIC 2000 SS	EX90L T4 IIIC 2000 SS
Zone Rating	Zone 0 (Class Division 1, certified for use in all Zones)		
Gas Class	IIB Ethylene & Propane	IIC Hydrogen & Acetylene	IIIC Explosive Dust
Gross Weight (kg)	8.7	8.5	8.8
Net Weight (kg)	8.0	7.8	8.2
Open Height (mm)	880		
Closed Height (mm)	580		
Width (mm)	335		
Depth (mm)	220		
Voltage AC/DC	110-250V AC - 12V DC (max 1.8A)		
Battery	9.6V Rechargeable Nickel Metal Hydride (NiMH)		
Light Type	High Intensity LED		
Light Head	Single Sided	Single Sided	Single Sided
Lumens	Low: 720 High: 1440	2000	2000
Ingress Protection	IP65		
Rated Ambient Temp.	-20°C ≤ T amb ≤ +40°C		
Temperature Class	T4 (max 135°C)		
Charging Time (hrs)	7-8		
Battery Run Time (hrs)	Low: 16-17 High: 8-9	11-12	11-12

* IIB environments may contain gases equal in volatility up to Ethylene and Propane
** IIC environments may contain gases equal in volatility up to Hydrogen and Acetylene
*** IIIC environments may contain explosive dust

10. Spare Parts

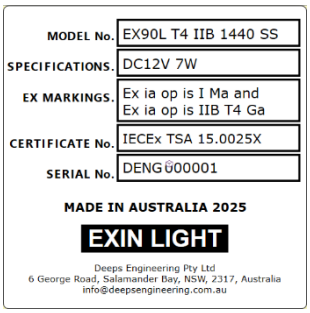
Maintenance, Repairs, Battery and LED replacements of the EX Series EXIN Lights must only be carried out by an Authorized Service Agent.

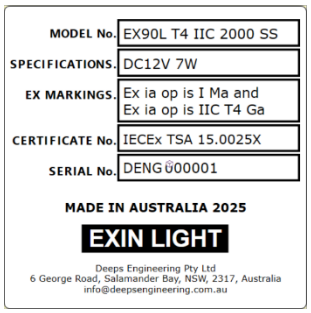
11. Accessories

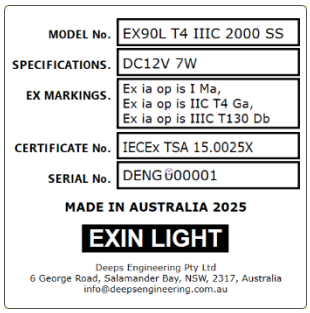
Attachments available for other model EXIN Lights are not suitable for the EX Series EXIN Lights as they are not Intrinsically Safe (EX). Only Attachments specified as suitable for the EX Series EXIN Lights by the Manufacturer may be used with these models.

12. Labelling

IECEx:







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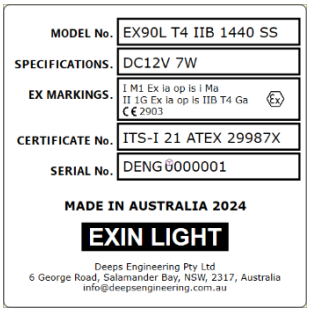

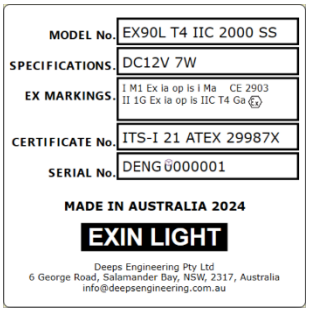

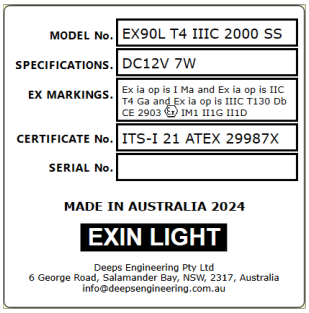

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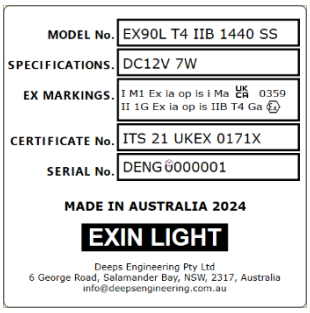

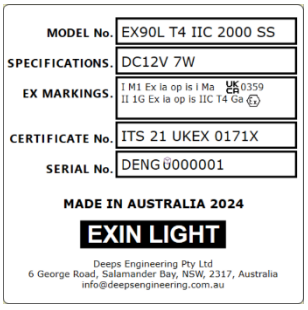

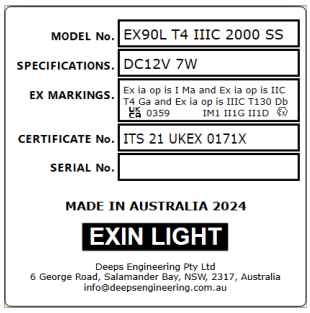

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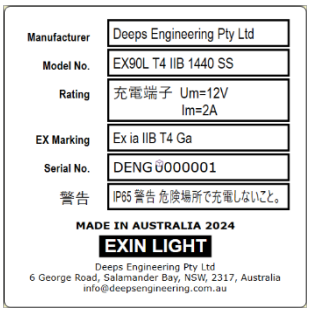

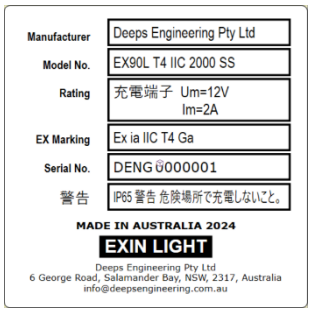

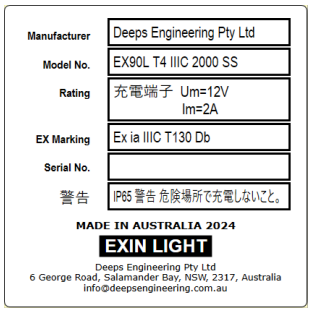

13. Product Warranty

International Product Warranty
The EXIN Light is covered by a 12 month Limited Warranty (the "EXIN Light Warranty").

Proof of Purchase
The EXIN Light Warranty can only be claimed with a copy of the dated sales receipt as proof of purchase.

The EXIN Light Warranty
EXIN Light makes every effort to ensure that its products meet high quality and durability standards and warrants to the original Customer/Purchaser of our products that each product be free from defects in materials and workmanship as follows:

The EXIN Light Warranty is a 1 year limited warranty from the time of purchase by the end-user on this EXIN Light product. This Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside of our facilities or our Authorised Service Agents or due to a lack of maintenance or to light tubes or LED's.

To proceed with a Warranty claim; the product must be returned via normal freight pre-paid to Deeps Engineering for examination with proof of purchase and an explanation of the problem.

To the extent permissible by law, EXIN Light:

1. Excludes all implied conditions or warranties and consumer guarantees; and

2. Limits its liability for breach of the EXIN Light Warranty or for breach of any non-excludable warranty, condition or consumer guarantee to:
    a. Replacement of the defective good; or
    b. Repair of the defective good.

3. Excludes all liability for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our Products.

Local Laws

It is the responsibility of the Distributor to ensure that EXIN Light's Products, Packaging and Labelling comply with any laws in the Distributor's jurisdiction that impact on the distribution of the EXIN Light in such jurisdiction. Should such laws impact on such issues as labelling, registration or certification of the product or warranties, it is the

responsibility of the Distributor to provide full details of such issues to EXIN Light before orders are placed. Any changes required to EXIN Light's labelling or products will be at the cost of the Distributor.

Date of Warranty Claim: _____

Purchaser's Name: _____

Purchase Date: _____

Purchased from (Company Name): _____

Product Name: _____

Product Model: _____

Serial No: _____

NOTES: