USER MANUAL

DEFENDER®



LUX LIGHT

FLEX LIGHTS & INDEPENDENT LIGHTING AUXILIARY

85LUX10; 85LUX5; 85LUXPC

en-GB

TABLE OF CONTENTS

1 DOCUMENT VERSION AND REVISIONS 5

2 INTRODUCTION 6

2.1 You Made the Right Choice! 6

2.2 Contacts 6

2.3 Link to the Download Centre 6

2.4 Visualisation Conventions in This User Manual 6

3 PRODUCT COMPLIANCE 8

3.1 Manufacturer's Declaration 8

3.2 Declaration of Conformity 8

4 SAFETY INSTRUCTIONS 9

4.1 Intended Use 9

4.2 Explanation of Safety and Warning Symbols 9

4.3 Explanation of Safety and Warning Symbols AC-DC Adaptor 9

4.4 Structure of Warning Messages 9

4.5 General Safety 10

4.6 Electrical Safety 11

4.7 Physical Safety 11

4.8 Thermal Safety 11

4.9 Device Safety 11

4.10 FLEX LIGHT Safety 11

5 PRODUCT DESCRIPTION 12

5.1 Product Overview 12

5.2 Compatible Defender LUX Products 13

5.3 Technical Data 85LUXPC 13

5.4 Technical Data FLEX LIGHT 85LUX5 & 85LUX10 14

6 PREPARATION 15

6.1 Scope of Delivery 15

7 INSTALLATION 16

7.1 About Bending Capabilities by Axis 16

7.2 Connecting and Sealing the FLEX LIGHT 16

7.3 Laying the LED Light Strip 17

8 OPERATION 18

8.1 Power Supply 18
8.1.1 Connecting the Power Supply 18
8.1.2 Turning the Device on or off 18
9 MAINTENANCE 19
9.1 Product Maintenance 19
9.2 Storing the Device 19
10 REPAIR 20
11 DISPOSAL 21
11.1 Packaging Disposal 21
11.2 Device Disposal 21

1 DOCUMENT VERSION AND REVISIONS

Version	Date	Implemented Changes
1	11/2025	Original version

2 INTRODUCTION

2.1 YOU MADE THE RIGHT CHOICE!

This product has been developed and manufactured to the highest quality standards to ensure many years of problem-free operation. Find further information about Defender on our website: https://defender-protects.com/

2.2 CONTACTS

	Adam Hall GmbH Headquarter	Customer Service
E-mail	info@adamhall.com	customerservice@adamhall.com
Phone	+49 6081 9419-0	+49 6081 941973-0
Street	Adam-Hall-Str. 1	Adam-Hall-Str. 1
Postal code / city	61267 Neu-Anspach	61267 Neu-Anspach
Website	*www.adamhall.com*	*www.adamhall.com*

2.3 LINK TO THE DOWNLOAD CENTRE

You can download some information, such as CAD data or technical data, from the Download Centre. Scan the QR code or click the link to download this information:

85LUXPC 85LUX5 85LUX10

2.4 VISUALISATION CONVENTIONS IN THIS USER MANUAL

In this manual we use graphical symbols and icons in certain contexts. Find below a table with explanations and use cases of the graphical symbols and icons.

Icon / Symbol	Designation	Context	Explanation / Example
↙	**Prerequisite**	Tasks	Used in task topics to indicate a prerequisite that must be met before beginning the task.
⇨	**Result / Intermediate Result**	Tasks	Used in task topics to indicate a result or intermediate result of an action step.
1 Step **a)** Substep	**1 Action Step** **a) Substep**	Tasks	Used in task topics to indicate action steps and substeps.

Icon / Symbol	Designation	Context	Explanation / Example
1	**Callout**	Graphics; tasks	Text-image reference or labeling of certain functions on the device
[...]	**Value range indicator**	Technical data; paragraphs; lists	Indicates the range of a value, such as "Compressor ratio: **1:1...20:1**". Mostly used in tables or callouts.
*	**Asterisk**	Paragraphs; tables	Indicates additional information in a footnote.
The **LIM** LED lights up	**General User Interface element**	Paragraphs; tasks; tables; lists	The words presented in this way represent graphic user interface elements on the device.
PAGE button	**Key / Button**	Paragraphs; tasks; tables; lists	The words presented in this way represent user interface controls on the device.
`<name>`	**User input**	Paragraphs; tasks; tables; lists	The words presented in this way represent required user inputs.
https://adamhall.com	**Weblink**	Paragraphs; tables; lists	External link to a website

3 PRODUCT COMPLIANCE

3.1 MANUFACTURER'S DECLARATION

Adam Hall offers a voluntary, EU-wide manufacturer's guarantee of 2 years. The statutory warranty period is not affected by this voluntary guarantee.
Visit the Adam Hall Service Portal to access the **Download Centre**:
https://portal.adamhall.com/
Under the **Service & Regulations** section, you find our current detailed manufacturer's declarations, warranty conditions, and limitation of liability.
To request warranty for a product, please contact:
Adam Hall GmbH, Adam-Hall-Str. 1, 61267 Neu-Anspach
customerservice@adamhall.com
0049 (0)6081 / 9419-1000

3.2 DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY

CE

Adam Hall GmbH hereby confirms that this product meets the following guidelines (where applicable):

- Low-Voltage Directive (2014/35/EU)
- EMC Directive (2014/30/EU)
- RoHS (2011/65/EU)
- RED (2014/53/EU)

Declarations of conformity for products subject to the LVD, EMC, RoHS Directive can be requested from info@adamhall.com. Declarations of conformity for products subject to RED can be downloaded from *http://www.adamhall.com/compliance*.

4 SAFETY INSTRUCTIONS

4.1 INTENDED USE

This product has been developed for the professional use in the field of event technology, studio, TV, and broadcast.
The device is intended for mobile applications and not for fixed installations.
It is suitable for domestic use.
Do not use the product outside the operating conditions as stated in the user manual under Technical Data. Liability for damage and third-party damage to persons and property due to inappropriate use is excluded.
This product is not suitable for children and persons with limited physical, sensory, or mental capabilities or lack of experience and knowledge.

4.2 EXPLANATION OF SAFETY AND WARNING SYMBOLS

Find the following safety and warning symbols on the device, the user manual, or the packaging:


This symbol indicates that you must read the complete user manual before using the product.


This symbol indicates a general hazardous situation.


This symbol indicates hazards that can cause electric shock.


This symbol indicates tripping hazards.


This symbol indicates helpful hints or additional information.

4.3 EXPLANATION OF SAFETY AND WARNING SYMBOLS AC-DC ADAPTOR


This symbol indicates that the device is an independent lighting auxiliary.



This symbol indicates that the device is protected against overheating. The number inside the triangle refers to the maximum surface temperature (in degrees Celsius) that may occur in the event of a fault.


This symbol indicates that the device is equipped with a short-circuit-proof and safety isolating transformer.

4.4 STRUCTURE OF WARNING MESSAGES

In this user manual, warning messages are structured with a safety symbol, a signal word, a hazard description, and instructions on how to avoid injuries or death.


DANGER

Indicates a hazardous situation which will result in death or serious injury.

 WARNING	**Indicates a hazardous situation which could result in death or serious injury**
 CAUTION	**Indicates a hazardous situation which could result in minor or moderate injury.**
 NOTICE	**Indicates situations or conditions that could result in damage to property and/or the environment.**

4.5 GENERAL SAFETY





- Read this document carefully.
- Keep this document for later reference.
- Follow closely the instructions in this document.
- This document is an integral part of the product. If you sell or pass on the product, you must include this document.
- Only use this product according to its intended use.
- Risk of chocking. Keep small parts away from children and individuals with impaired physical, sensory, or mental capabilities.
- Risk of suffocation. Keep plastic bags away from children and individuals with impaired physical, sensory, or mental capabilities.
- Observe all safety instructions and warning messages in this document, on the device, and on the packaging.
- Products are subject to continuous further development. If you find discrepancies between this document and the product labeling, the information on the product always takes priority.
- Do not remove safety instructions or warning messages from the product.
- Do not modify the product.
- If the product shows any sign of damage, do not use it.
- Do not operate the product with removed or missing covers.
- Do not expose the product to direct sunlight.
- If not further specified in the user manual under Technical Data, do not use the product in ambient temperatures that exceed 45 °C / 113 °F or fall below -20 °C / -4 °F
- Do not use the product in tropical climate.
- Do not use the product above 2000 metres of altitude.
- Unless otherwise stated, do not use the product under marine conditions.
- Maintenance and repairs may only be carried out by authorized service personnel.
- Store and transport the product in a dry and safe environment.
- Clean the product on a regular basis. If applicable, see the user manual for maintenance intervals.
- If the device was exposed to strong temperature changes, such as during transport, do not switch it on immediately. Wait until the device has reached ambient temperature.

4.6 ELECTRICAL SAFETY



- This is an electrical device in protection class II. Do not connect the device to the protective earth.
- Do not bypass the mains fuse.
- Use only mains fuses as specified by the manufacturer.
- Do not use kinked or otherwise damaged power cables.
- Only operate the device on compliant, tested and intact mains power outlets.
- Make sure that the voltage and frequency of the mains power match the values specified by the manufacturer.
- Take suitable measures against overvoltage, such as lightning strikes.
- For devices with a power out connector, make sure the total current consumption of all connected devices does not exceed the value specified by the manufacturer.
- This device is not suitable for continuous current.
- Disconnect the device from all poles before maintenance, repair or extend periods of non-use.
- Permanently connected power cables may only be replaced by a qualified service technician.

4.7 PHYSICAL SAFETY





- Check all cable routes to prevent tripping accidents.

4.8 THERMAL SAFETY

- Do not install the device near heat sources, such as radiators or ovens.
- Do not block any ventilation openings.
- Unless otherwise stated, keep a minimum clearance of at least 20 centimetres around the device.
- Unless otherwise stated, keep flammable materials, such as paper or wood, at least 50 centimetres away from the device

4.9 DEVICE SAFETY



- Do not switch the device on and off in quick succession, because this will shorten the device lifetime.

4.10 FLEX LIGHT SAFETY

- Do not bend the FLEX LIGHT along its tall side (height) with a bending radius smaller than 20 centimetres.
- Do not bend or fold the FLEX LIGHT along its flat side (width).
- Do not crush or compress the FLEX LIGHT.
- Do not twist the FLEX LIGHT along its longitudinal axis.
- Do not expose the FLEX LIGHT to sharp or pointed objects or to excessive mechanical stress.
- Do not pull or stretch the FLEX LIGHT.

5 PRODUCT DESCRIPTION

5.1 PRODUCT OVERVIEW

INDEPENDENT LIGHTING AUXILIARY 85LUXPC



1. Europlug IP44
2. Input cable 1 m
3. Independent Lighting Auxiliary
4. Output cable 3 m
5. Female connector with screwed-on end cap IP65

FLEX LIGHTS 85LUX5 & 85LUX10



1. Male connector with screwed-on end cap IP65

2 **Transparent LED FLEX LIGHT with 120 LEDs per metre**

3 **Female connector with screwed-on end cap IP65**

5.2 COMPATIBLE DEFENDER LUX PRODUCTS

STRAIGHT CABLE PROTECTORS WITH TRANSLUCENT LIDS

Product name	Dimensions	Article number
MINI LUX	50 mm	85200LUX
ULTRA L 2 LU	143 mm	85601LUX
MIDI 4 LUX	55 mm	85301LUX
XXL LUX	87 mm	85500LUX
NANO LUX	32 mm	85150LUX
3 LUX	75 mm	85002LUX
MiDI 5 LUX	55 mm	85300LUX
MICRO 2 LUX	45 mm	86100LUX
ULTRA L LUX	143 mm	85600LUX

5.3 TECHNICAL DATA 85LUXPC

General	
Material	Aluminium
Colour	Silver
Cable colour	Black
Weight	1.6 kg

Mains Operation	Value
Operation voltage	100 V ... 240 V, 50 Hz / 60 Hz
Power supply type	External switched-mode power supply (SMPS)
Power Factor (λ)	≥ 0.95
Mains connector	Type F plug (male)
Input cable length	1 m
Output cable length	3 m
Output voltage	24 V DC
Max. output power	150 W
Max. output current	6.25 A

Environmental	
Protection class mains connector	IP44

Environmental	
Protection class output connector	IP65
Application area	Indoor and outdoor

5.4 TECHNICAL DATA FLEX LIGHT 85LUX5 & 85LUX10

General	
Material	Silicone
Colour	Transparent
Cable colour	Black

LEDs	
Number of LEDs per metre	120
LED power	5 W/m
Colour Temperature	4000 K ±300 K

Environmental	
Protection class	IP65
Application area	Indoor and outdoor

Mains Operation	85LUX5	85LUX10
Operating voltage	24 V DC (external power supply necessary)	
Rated power	25 W	50 W
Rated current	1.04 A	2.08 A
Operating temparature	-20°C ... +45°C	
Luminous efficacy	73 lm/W	
Luminous flux	365 lm/m	
Beam angle	270°	
Color Rendering Index (CRI)	>90 (Ra)	

Dimensions & Weight	85LUX5	85LUX10
Length	5.3 m	10.3 m
Effective length	5 m	10 m
Input cable length	15 cm	
Output cable length	15 cm	
Max length in series assembly	25 m	
Diameter	15 mm	
Weight	1 kg	1.9 kg

6 PREPARATION

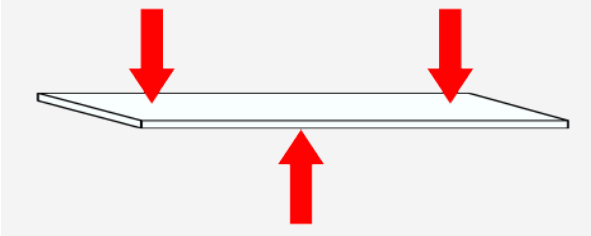
6.1 SCOPE OF DELIVERY

- Product
- Safety Compliance Information

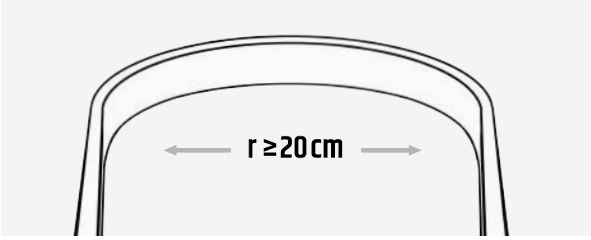
7 INSTALLATION

7.1 ABOUT BENDING CAPABILITIES BY AXIS

PERMITTED BENDING (UP-AND-DOWN)



You may bend the FLEX LIGHT upward and downward along its tall side (height), provided the minimum bending radius is maintained.



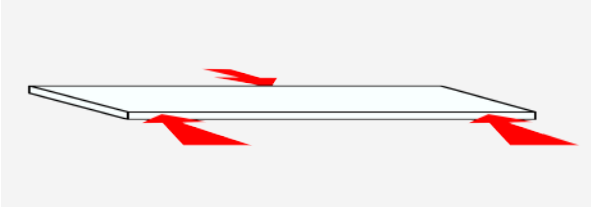
NOTICE

Bending Radius Exceeded

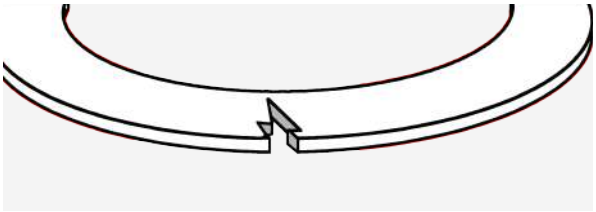
Damage to the device

a. Always maintain a minimum bending radius of 20 centrimetres when bending the FLEX LIGHT along its tall side (height).

PROHIBITED BENDING (SIDE-TO-SIDE)



Don't try to bend the FLEX LIGHT along its flat side (width).



NOTICE

Incorrect bending direction

Damage to the device

a. Do not bend the FLEX LIGHT along its flat side (width).

7.2 CONNECTING AND SEALING THE FLEX LIGHT

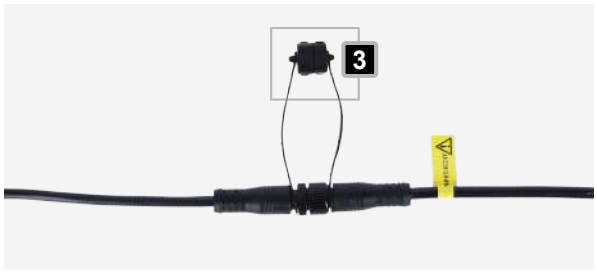
The total length of the FLEX LIGHT chain can be extended up to 30 metres.



1 Unroll the FLEX LIGHTs following its winding direction.
2 Unscrew the end caps from the FLEX LIGHTs.
3 Identify the female connector 1 and male connector 2 on the FLEX LIGHTs you intend to connect.



4 Connect the male and female connectors of the FLEX LIGHTs.
5 Screw the threaded ring onto the connection.
6 Screw the end caps of the male and female connectors together at the connection point.

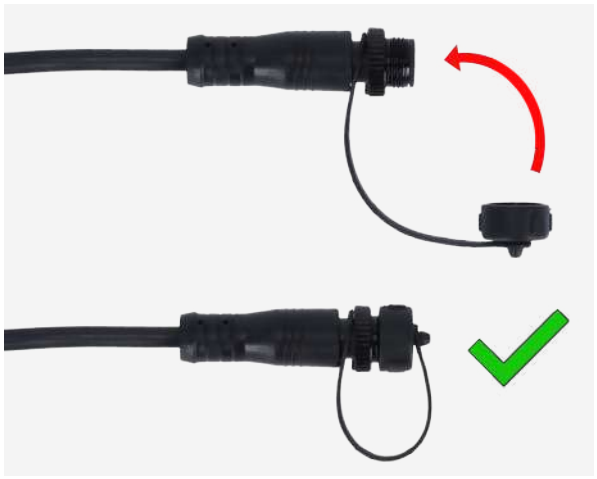


NOTICE

Loose end caps on installed FLEX LIGHTs

Risk of moisture transfer to the connectors when preparing FLEX LIGHTs for transport

a. Always screw the male and female end caps together during operation 3.



7 Screw the end cap onto the final section of the last FLEX LIGHT of the series.

NOTICE

Loss of IP65 Protection

Risk of short circuit

a. Make sure the end cap is securely screwed onto the end of the FLEX LIGHT chain to maintain the IP protection rating.

7.3 LAYING THE LED LIGHT STRIP

FLEX LIGHT ONLY IN CABLE DUCT

1 Insert the FLEX LIGHT into the cable duct of the cable protector.

FLEX LIGHT TOGETHER WITH CABLES IN CABLE DUCT

✓ You have placed all the necessary cables in the cable duct of the cable protector.

2 Insert the FLEX LIGHT into the cable duct above the cables.

Make sure that the volume within the cable duct, including the light tube, does not exceed 80 percent.

8 OPERATION

8.1 POWER SUPPLY

8.1.1 CONNECTING THE POWER SUPPLY



NOTICE

IP44 Europlug in IP65 environment

Short circuit

a. Do not use the IP44 europlug connector in environments that require IP65 protection.

1 Connect the male connector of the FLEX LIGHT to the female connector of the Independent Lighting Auxiliary.
2 Screw the locknut over the connection.
3 Connect the mains power connector into the mains power socket.



Test the FLEX LIGHT installation before closing the cable protector to ensure it lights up correctly and has no loose connections.

8.1.2 TURNING THE DEVICE ON OR OFF



The FLEX LIGHTs switch on automatically when connected to a power source.

1 Plug the mains power connector into the socket to turn the FLEX LIGHT on.
2 Unplug the mains power connector to turn the FLEX LIGHT off.

9 MAINTENANCE

9.1 PRODUCT MAINTENANCE



CAUTION

Mains Voltage

Risk of electric shock

a. Before you perform maintenance work on the device, disconnect the device from all poles.



NOTICE

Damage to the device and void of warranty

a. Do not use cleaning agents, disinfectants, alcohol, or agents with abrasive effect for cleaning.

Carry out the maintenance measures listed below on a regular basis. The frequency of cleaning depends on the environment in which you use the product. Damp or dirty environments may cause increased soiling and wear.

VISUAL INSPECTION

Check the following points before operating the device.

- ⚠ **WARNING! Risk of electric shock.** Check mains power cables for damage or material fatigue.
- Check all air inlets and outlets for damage, dust, or dirt deposits.
- Check all outside screws and covers for corrosion, damage or excessive wear.
- Check all connectors and rubber sealing caps for damage, dust, or dirt deposits.
- ⚠ **WARNING! Risk of falling objects.** Check that all screws, fasteners, and rigging points are securely tightened.

CLEANING

- Clean the surface with a clean and damp lint-free cotton cloth. Wipe off all excess moisture.
- **NOTICE! Do not use compressed air.** Clean any air inlets and outlets of dust and dirt deposits with a clean and damp lint-free cotton cloth.
- Clean all plug contacts from dust and dirt with a dry lint-free cotton cloth.

9.2 STORING THE DEVICE

Store the device only in a dry and clean environment. If you are storing the individual components of the device, use special protective covers, bags, and cases. Find such accessories for your product in the Adam Hall Shop (https://www.adamhall.com/shop).

10 REPAIR



CAUTION

Do not repair the device.

a. Repairs may only be carried out by specialist personnel authorised by the manufacturer.
b. If your device is damaged or requires service, contact the Adam Hall Customer Service.

11 DISPOSAL

11.1 PACKAGING DISPOSAL



1. You can feed the packaging into the reusable material cycle using the usual disposal methods.
2. Separate the packaging in accordance with the applicable disposal laws and recycling regulations in your country

11.2 DEVICE DISPOSAL



1. This device is subject to the European Directive on Waste Electrical and Electronic Equipment, as amended. WEEE Directive Waste Electrical and Electronic Equipment. Old appliances do not belong in the household waste. The old device must be disposed of via an approved disposal company or a municipal disposal facility. Observe the applicable regulations in your country.
2. Observe all disposal laws applicable in your country.
3. As a private customer, you can obtain information on environmentally friendly disposal options from the seller of the product or the appropriate regional authorities.

DEFENDER®

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