

***ecom***  
***instruments***



## ***Lite-Ex PL 30***

**Bedienungsanleitung · Operating Instructions**

**Notice d'utilisation · Gebruiksaanwijzing**

**Istruzioni per l'uso · Instrucciones de uso**

**Manual de instruções · Bruksanvisning**



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**Note:**

The current operating instructions, EC Declaration of Conformity and the Ex-certificate are available for download from the relevant product page under [www.ecom-ex.com](http://www.ecom-ex.com); alternatively they can be requested directly from the manufacturer.

## **1. Application**

The Lite-Ex PL 30 is an LED pocket torch designed for industrial applications or use in potentially explosive areas of Zones 2, 1 and 0 as well as 22, 21 and 20 in accordance with Directive 99/92/EC (ATEX 137).

## **2. Safety instructions**

These operating instructions contain information and safety regulations that must be followed to ensure safe and reliable operation of the unit under the described conditions. Failure to follow the information and instructions can have dangerous consequences or may contravene applicable regulations.

**Please take the time to carefully read through the owner's manual before you start using the unit. In the event of any doubt or discrepancies (for example, due to translation or printing errors), the German version of these operating instructions shall prevail.**

## **3. Errors and load restrictions**

If there is any risk that the safety or integrity of the unit has been compromised, the unit must be taken out of operation immediately and removed from the Ex-area without delay.

Action must be taken to prevent the device from being accidentally placed into operation again.

We recommend sending the unit to the manufacturer to be examined.

The safety and reliability of the unit may be at risk if, for example:

- Damage is visible on the housing
- The unit has been subjected to excessive loads for which it is not designed
- The unit has been improperly stored
- The unit has been damaged in transit
- Labels or markings on the unit are illegible
- Malfunctions occur
- Permitted tolerances or threshold values have been exceeded

In the unlikely event that the product becomes faulty, it is recommended that any repairs are carried out only by ecom instruments GmbH as the use of non-ecom spare parts invalidates both the warranty and the Ex-certification.

## **4. Safety regulations**

Persons using the unit must observe the standard safety regulations and read the certificate to prevent incorrect operation or misuse of the unit.

## **The following additional safety regulations must also be observed:**

- The unit must not be opened within the Ex-area.
- The batteries must only be changed outside the Ex-area.
- Additional or spare batteries must not be carried in the Ex-area.
- Only approved battery types may be used.
- Only spare sealing rings and discs of ecom instruments are allowed.
- Only accessories approved by ecom instruments GmbH may be used.
- Prevent the unit from coming into contact with aggressive acidic or alkaline solutions.
- Do not open the inside torch head.

### **4.1 Special requirements for use in ex-hazardous areas**

- Storing of the torch is prohibited!
- After changing the batteries or the sealing rings always check to make sure that the sealing rings and threads are clean and in good condition.
- Before using the lamp in the Ex-hazardous area and in order to ensure the IP rating, please check that all parts of the unit are hand tightened up to the stop
  - being careful not to over-tighten.

## **5. Safety instructions**

### **Caution! Strong light may blind other people.**

- Do not look directly into the light.
- Do not shine the light directly into the eyes of other people.

## **6. Ex-data**

EC-type examination certificate no.: ZELM 05 ATEX 0272 X

Ex-designation:

 II 1 G EEx ia IIC T4

 II 1 D T130°C IP65

Approved for Zones 2, 1 and 0, device group II, potentially explosive gases of gas group C, vapours or mist, and temperature class T4.

Approved for Zones 22, 21 and 20, device group II, potentially explosive dusts, and T130°C

The certification assures, that the maximum malfunction-surface-temperature of maximum 80% of the temperature class T4 / 130° C is taken into consideration (acc. to EN 1127-1).

## 7. Technical data

|                         |                                     |
|-------------------------|-------------------------------------|
| Ambient temperature Ta: | -20 ... +50°C                       |
| Storage temperature:    | -30 ... +60°C (without batteries)   |
| Battery / power supply: | 3 x LR14 (see table)                |
| Lamp:                   | 1 high-performance LED (3-watt)     |
| Operating time:         | > 48 hours (continuous)             |
| Dimensions:             | approx. 220 mm x 40/45 mm           |
| Weight:                 | approx. 550 g (including batteries) |
| IP rating:              | IP 65                               |
| ESD protection:         | Antistatic housing                  |
| CE designation:         | C E 0102                            |

### Table of approved battery types

| Manufacturer | Type                              |
|--------------|-----------------------------------|
| GP           | Super Alkaline Battery 14A LR14   |
| Eveready     | Energizer No. E93                 |
| Duracell     | Procell MN1400 LR14               |
| Panasonic    | Powermax 3 LR14                   |
| Panasonic    | Powerline Industrial Battery LR14 |
| Energizer    | Ucar Gold LR14                    |

### List of approved sealing rings and discs

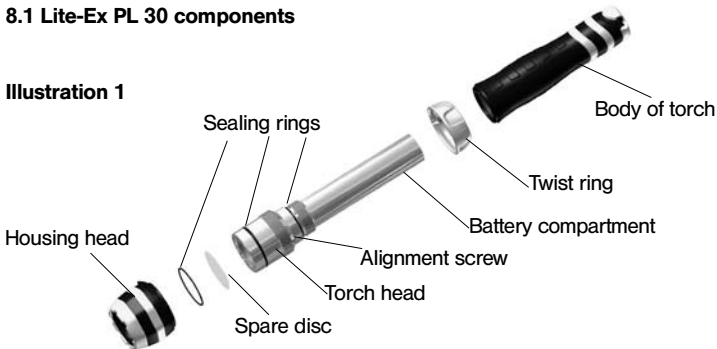
| Manufacturer | Type                                    |
|--------------|---|
| ecom         | sealing rings type PL 30 (complete set) |
| ecom         | spare disc type PL 30                   |

## 8. Functional description / operating information

Please take the time to carefully read through these operating instructions to ensure that you are familiar with all of the functions of your Lite-Ex PL 30 and know how to use all of the functions. For your own safety and information please read through the information on the following pages.

## 8.1 Lite-Ex PL 30 components

### Illustration 1



## 8.2 Getting started

In order to be able to use the torch in the Ex-area, you must first check that the outer housing head and body are screwed on completely. After this has been done, you can switch on the torch by turning the yellow twist ring slightly in a clockwise direction. The torch is supplied with factory-fitted batteries.

## 8.3 Battery replacement

When the brightness is no longer satisfactory, the batteries should be replaced. It is strongly recommended that all three batteries be replaced together. When replacing the batteries, only use approved battery types (see table of approved battery types in section 7. Technical data).

To replace the batteries, hold on to the housing head and the twist ring, and turn the body of the torch anticlockwise until it comes off. Take the used batteries out of the battery compartment, observing correct polarity and replace them with new ones. After you insert the new batteries screw the body of the torch back on. Make sure that torch components are screwed together securely before switching the torch on.

### Battery replacement

- Only use approved battery types. See table in section 7. Technical data.
- Always replace all of the batteries together.
- Make sure that the polarity of the inserted batteries is correct.
- Please ensure that all used batteries are properly disposed of in an environmentally friendly manner.
- After changing the batteries or the sealing rings always check to make sure that the sealing rings and threads are clean and in good condition.

## **8.4 Cleaning the twist ring**

A non-contacting twist ring is used to switch on the Lite-Ex PL 30 (see description above). Dirt or moisture does not effect the function. The twist ring is easy to clean if excessive amounts of dirt and grime have made it difficult to turn. First take off the torch body and remove the batteries (see section 8.3 Battery replacement). Remove the twist ring by sliding it off the back of the torch, and then clean the ring. When putting the twist ring back on, make sure that the arrow marks on the ring line up with the alignment screw on the bottom part of the torch head (see illustration 1). Then re-insert the batteries, and screw the body of the torch back on.

## **8.5 Lamp replacement**

The Lite-Ex PL 30 is equipped with an extremely long-lasting LED lamp. Replacing the LED is normally not required. If, however, the torch is defective or the brightness of the torch has diminished, it should be sent to ecom instruments for inspection or repair. Under no circumstances should you attempt to open the torch head. Manipulating the torch head or LED on your own poses a risk to the safety of the torch and is not permitted.

## **8.6 Replacing the spare disc**

The torch head is protected by the housing head that surrounds it as well as an additional disc, which is positioned over the opening where the beam is emitted. The disc is made of high-quality material. Should, however, the disc break, it is possible to replace it. To replace the disc, hold on to the body of the Lite-Ex PL 30 and the twist ring, and carefully unscrew the housing head by turning it anticlockwise. Clean the housing head thoroughly to remove any remaining pieces, and check the sealing ring for damage. After this has been done, you can install a new glass disc and, if necessary, new sealing rings. Only spare sealing rings of ecom instruments are allowed. The sealing ring is positioned between the housing head and the disc (see illustration 1). When putting the housing head back on, ensure that the seal is positioned properly on the disc. After installation, you should not be able to see any part of the sealing ring through the opening where the beam is emitted. If the inside of the torch head or lens is also damaged, the torch should be sent to the manufacturer for repair.

## **9. Repairs**

Repair work is subject to the nationally valid regulations and directives. We therefore recommend that such work be performed by ecom instruments GmbH, Germany, as all repairs must be examined to ensure functional safety.



## **10. Cleaning, maintenance and storage**

- Only use a suitable cloth or sponge to clean the unit. Do not use solvents or abrasive cleaning agents to clean the unit.
- We recommended having the operation and lumen output of the device checked by the manufacturer every two years.
- The batteries should be taken out of the unit if it is to be stored for extended periods.
- The storage temperature should be within the permitted range of -30°C to +60°C.

## **11. Warranty and liability**

Under the general terms and conditions of business, ecom instruments GmbH offers a two-year warranty for function and materials on this product when used under the specified operating and maintenance conditions. Batteries, LED/Lamps and working parts are considered consumable parts and are not covered under the warranty.

In addition to the standard 2 years manufacturer's warranty, ecom instruments GmbH offers an optional lifetime warranty on the torch housing. This warranty includes damage which is incurred only when the device is properly used. Damage to the front disc is not included, neither is damage in the form of cosmetic and superficial scratches to the housing or to the 'Ex-certification' and other text contained on the housing.

After the 2 years standard warranty period, in the event that the housing has to be changed, this optional lifetime warranty does not include any costs that may be incurred for inspection, packing and carriage etc. This warranty is only limited by the future availability of spare parts. This warranty is invalidated if the torch head unit has been opened / tampered with in any way or if the sealing is damaged.

This warranty does not extend to products that have been used improperly, altered, neglected, damaged by accident or subjected to abnormal operating conditions or improper handling. In the event of a warranty claim, the faulty device should be returned to ecom instruments GmbH. We reserve the right to readjust, repair or replace the unit.

The above warranty terms represent the sole rights of the purchaser to compensation and apply exclusively and in place of all other contractual or statutory warranty obligations. ecom instruments GmbH does not accept liability for specific, direct, indirect, incidental or consequential damages or losses, regardless of whether they are caused by breach of warranty, lawful or unlawful actions, actions in good faith or other actions. If in certain countries the restriction of statutory warranty and the exclusion or restriction of incidental or consequential damages is unlawful, then it may be possible that the above restrictions and exclusions do not apply for all purchasers. If any clause in these warranty terms should be found to be invalid or unenforceable by a competent court, then such a judgement shall not affect the validity or enforceability of any other clause contained in these warranty terms.

## 12. EC-Type Examination Certificate

### Prüf- und Zertifizierungsstelle

# ZELM Ex

## (1) EC-Type Examination Certificate

- (2) Equipment and Protected Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**
- (3) EC-Type Examination Certificate Number

**ZELM 05 ATEX 0272 X**

- (4) Equipment: **LED-Torch Type Lite-Ex PL \***
- (5) Manufacturer: **ecom instruments GmbH**
- (6) Address: **D-97959 Assamstadt**
- (7) The design of this equipment and its various approved embodiments are defined in the attachment to this type examination certificate.
- (8) The Prüf- und Zertifizierungsstelle ZELM, notified body no. 0620 in accordance with Article 9 of the EC Council Directive dated March 23, 1994 (94/9/EC), certifies that this equipment has been found to conform with the essential health and safety requirements for the design and construction of equipment and protected systems for proper intended use in potentially explosive areas in accordance with Appendix II of the directive.
- The results of the test are documented in the confidential test report no. ZELM Ex 0380512412.
- (9) The essential health and safety requirements are met by virtue of conformity with

**EN 60 079-0: 2004**  
**EN 50 284: 1999**

**EN 50 020: 2002**  
**EN 1127-1: 1997**

**EN 50 281-1-1: 1998**

- (10) If the certification number is followed by an "X", then this indicates that special conditions exist for the safe operation of the equipment. These special conditions are contained in the attachment to this certificate.
- (11) This EC-type examination certificate only refers to the construction/design, checking and testing of the specified equipment or protection system in accordance with Directive 94/9/EC. Further requirements contained in this directive may apply with regard to the manufacturing process and the supply of the equipment or protected system. Such requirements are not covered by this certification.
- (12) The equipment must be labelled with the following information:



**II 1 G EEx ia IIC T4**  
**II 1 D T 130°C IP65**

Certification Body **ZELM Ex**

Braunschweig, 18 Nov. 2005

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EC-type examination certificates without signature and stamp are not valid.  
This EC-type examination certificate may only be circulated without alteration.  
Extracts or alterations are subject to approval by the ZELM Ex testing and certifying body

Prüf- und Zertifizierungsstelle ZELM Ex • Siekgraben 56 • D-38124 Braunschweig Germany



### **13. EC Declaration of Conformity**

Further details relating to the declaration of conformity can be found at the following Internet address: **<http://www.ecom-ex.com>** in the Product Download area.



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