



Technical Documentation
ELBLite 28

EEEx-i Torch



ELBLite 28

Instruction Manual **ELBLite 28**

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General Information

1 Short Description

Special features of **ELBLite 28** in comparison with standard torches:

- no hot filament
- no exchanging of bulbs necessary
- no storage of fitting bulbs
- brighter light and longer operating periods than standard torches
- good colour distinction because of blue light in the spectrum
- economy mode saves even more battery power
- electronically clipped high current from fresh batteries
- light even from nearly empty batteries
- light weight
- handy by rubber layer and shape of the housing

2 Delivery Components

Delivery includes:

- torch **ELBLite 28** with strap

- carrier bag (not allowed inside of the Ex area!)
- fixed lamps (28 white LEDs)
- 4 Alkaline cells type Duracell MN 1500 AA (Mignon)

3 Exchanging the Battery

Battery exchanging not allowed inside of the Ex area!

Watch the safety instructions!

- Unscrew the top with the strap
- Take the battery holder out of the housing
- Take the empty cells out of the battery holder
- Insert new alkaline batteries type Duracell MN 1500 AA (or other certified types from the list in chapter 6) according to the marking inside of the battery holder
- Push the battery holder back into the lamp, contacts ahead. A groove in the holder prevents mixing up the contacts.
- Screw the top tight again

4 Switching On and Off

Switch the lamp on and off with the pushbutton.

- The first step switches the lamp over to full operation
- the second step to economy operation
- the third step switches it off again.

Please note: When the battery grows empty, the difference between full and economy operation becomes less.

5 Cleaning

You may clean the lamp with a damp cloth or a brush.

Clean the contacts of the battery holder from time to time.

No cleaning of the front glass inside of the Ex area because of potential charging of the cleaning tool!

Technical Data

6 Operation data

Torch **ELBLite 28**:

- Voltage: 6 V
- Electrical power with new battery:
ca. 0,7 W in economy mode, ca. 5 W full power
- Dimensions: \varnothing 44 · 171 mm
- Weight: 246 g (including battery)

ATEX certification:

- Typ: **ELBLite 28**
- II 2 G EEx ia IIC T4 bzw. II 2 D T 81°C IP65
- $-30^{\circ}\text{C} \leq T_{\text{amb}} \leq +50^{\circ}\text{C}$
- TÜV 03 ATEX 2077

Battery type:

- Duracell MN 1500 AA
- Capacity: 2850 mAh

Further type examined cells according to EN50020, §10.9:

| Manufacturer: | Type: | Manufacturer: | Type: |
|---------------|---------------------------------------|---------------|--|
| Daimon | Alkaline | Panasonic | Alkaline Power Line Industrial Battery |
| Double | Alkaline Battery | Rayovac | Maximum Alkaline Battery |
| Duracell | Alkaline | RS | Alkaline |
| Duracell | Alkaline Ultra | Varta | Alkaline Electric Power No. 8006 |
| Duracell | Professional Alkaline Battery Procell | Varta | Alkaline Extra Longlife No. 4006 |
| Eveready | Alkaline Energizer | Varta | Alkaline Maxi Tech No. 4706 |
| GP | Super Alkaline Battery 15 A | Varta | Alkaline No. 4806 |

Brightness

Brightness depends on the manufacturer, type and age of the battery. Even the same types of cells may lead to different brightness.

The built-in current control clips current peaks from new batteries. The soft start circuit reduces the danger of blinding when is switched on the first time.

Outside of the Ex area (and only there !!!)

the brightness may be increased by using NiCd or NiMH accumulator cells. The small inner resistance of the accumulator cells leads to longer operation under current controlled full power. Accumulators are strictly prohibited inside of the Ex area! Use only cells of the same type, age, operation history and manufacturer in the same battery pack.

7 Safety Advices

Read the manual completely and carefully before operation. Only the latest documentation is valid.

Installation, maintenance and cleaning of the units must only be performed by persons trained and authorized for this purpose, insofar as they are familiar with the units.

If it can be assumed that safe operation is no longer possible, switch off the unit and secure it against renewed switching-on.

It is prohibited for the operator or his staff to open the units in a way that is not described in this manual. This may only be done by specifically authorized personnel of E.L.B. Ex-Geräte GmbH

Modifications and conversions to the units are not permissible and will cause the Ex protection and the guarantee to become void.

Exchanging of batteries and opening of the battery box only outside of hazardous areas.

Only use battery cells type Duracell MN 1500 AA.

Light emitting diode radiation. Do not turn the light directly to the eyes of men or animals

E.L.B. Ex-Geräte GmbH is not liable for any subsequent damage.

The technical data specified for the hazardous area comply with the values certified in the European EEx approval. The user bears the sole responsibility of examining the equipment with regard to its suitability for the intended application and environmental conditions. E.L.B. Ex-Geräte GmbH accepts no liability for any lack of suitability.

For the installation, maintenance and cleaning of the units, it is absolutely necessary to observe the applicable ordinances and provisions concerned with explosion protection (VDE 0160, VDE 0165 or EN 60079-14, EN 50014 - 50039) as well as the Accident Prevention Regulations (UVV).

8 Liability

The technical data specified for the hazardous area comply with the values certified in the European EEx approval. The user bears the sole responsibility of examining the equipment with regard to its suitability for the intended application and environmental conditions. E.L.B. Ex-Geräte GmbH accepts no liability for any lack of suitability.

10 EC Declaration of Conformity



We hereby confirm the conformity of the equipment listed below with the directives of the Council of the European Community. The safety and installation instructions of the product documentation must be observed.

Model: **ELBLite 28**

Directive: EMC Directive 98/336/EWG)*

European Standard: EN 50081-1, 3/93*)
 EN 50081-2, 3/93*)
 EN 50082-1, 2/96*)
 EN 50082-2, 2/96*)

Directive: Low voltage Directive 73/23/EWG*)

European Standard: EN 61010-1, 3/94*)
 EN 50014: February 2000*)
 EN 50020: 1994*)

*) including amendments

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**TUV
CERT**
Translation

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) EC-Type Examination Certificate Number

TUV 03 ATEX 2077

(4) Equipment: ELBLite 14

(5) Manufacturer: ELB Ex-Gerate Bachmann GmbH

(6) Address: D64625 Bensheim, An der Hartbrucke 8

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TUV NORD CERT GmbH & Co. KG, TUV Cert-Certification Body, notified body number No 0032 in accordance with Article 9 of the Council Directive of the EC of March 23 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex 11 to the Directive. The examination and test results are recorded in the confidential report No. 02 YEX 181382.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014:1997

EN 50 020:2002

EN 50281-1-1:1999

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment or protective system must include the following:

II 2 G EEx ia IIC T4 or II 2 D T75°C

TUV NORD CERT GmbH & Co. KG
TUV CERT-Certification Body
Am TUV 1
D-30519
Tel : 0511 986-1470
Fax : 0511 986-2555

Hannover, 25.03.2003

Head of the
Certification Body

SCHEDULE

(13)

(14) **EC-TYPE EXAMINATION CERTIFICATE No TUV 03 ATEX 2077**

(15) Description of equipment

The ELBLite 14 torch can be used in a potentially explosive atmosphere that requires category 2 or 3 equipment. The batteries must not be changed in the potentially explosive atmosphere.

The permissible ambient temperature range is -30°C to + 50°C

Electrical Data

| | |
|--------------------------------------|--|
| Power Supply (internal batteries) | 3 x Alkaline Battery Size AA to IEC LR6 U = 4.5 V |
|--------------------------------------|--|

It is only possible to use batteries that have been type approved in accordance with point 10.9 of EN 50020:2002. The manufacturer and type are stated in the operating instructions.

(16) Test documents are listed in the report Nr. 03 YEX 550480

(17) Special conditions for safe use

None

(18) Essential Health and Safety Requirements

no additional ones



Translation

1. SUPPLEMENT to

EC TYPE-EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2077

of the company: E.L.B. Ex-GERÄTE
Bachmann GmbH
An der Hartbrücke 8
D-64625 Bensheim

In the future, the hand lamp type **ELBLite 14** may also be manufactured according to the documents listed in the test report.

The modifications concern the extension of the type designation, the marking and the internal design.

The additional type designation is: **ELBLite 28** with the marking: II 2 G EEx ia IIC T4 resp. II 2 D T 81°C

Electrical data

Type **ELBLite :28**

supply 4 alkaline batteries size AA according to IEC LR6
(internal battery) U = 6 V

Only successfully type tested batteries according to chapter 10.9 of EN 50020:2002 are admissible.

The manufacturers and types are listed in the operating instruction.

All other data apply unchanged for this 1. Supplement.

(16) Test documents are listed in the test report N° 04 YEX 551455.

(17) Special conditions for safe use
none

(18) Essential Health and Safety Requirements
no additional ones

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Hanover, 2004-05-06

Head of the
Certification Body