

Multifunctional, inductive, safe!

LED Lighting Systems
for hazardous areas Zone 0



Crouse-Hinds
by **EAT•N**

One System - many possibilities

The TX/CX 20/40 LED lighting system is the ultimate, multifunctional lighting solution for use in hazardous areas. Thanks to the improved operating properties, the reduced maintenance requirements and the special features of an emergency lighting unit, this versatile lighting system is ideal for operation in almost all hazardous areas.



Lighting for Zone Zero

Safety first

The charger and the torch are continuously checked and any faults are indicated by means of an LED. The intelligent charging routine allows a gentle and optimum charging of the battery, thus guaranteeing the high performance and long service life of the rechargeable batteries.

Maintenance-free and reliable

Based on the charging technique, the encapsulated design and the shockproof LED technique this maintenance-free torchlights are constantly available.

More light

In spite of the low power requirement, the highly efficient and impact resistant LED lighting technology provides a very high luminous intensity. Together with a lens (5° TX 20, 4° TX 40) and the reflector, the 3W high efficiency LED produces a bright and uniform light flux (200lm TX 40, 114 lm TX 20), thus ensuring an optimum illumination of the work area.

Features

- For hazardous areas zones 0, 1 and 2
- Operating cycle ca. 5 hours
- High light output due to 3W power LED
- Maintenance-free rechargeable battery
- Emergency lighting function
- Automatic standby light when battery capacity decreases
- Inductive charger for Ex Zone 1
- Automatic function test of lamp & charger
- Deep-discharge protection
- High degree of protection IP 67

Including Safety buffer

Before the overdischarge protection stage is reached, lamps automatically switches over to the weaker standby light which seriously extended the operating time.

Contact-free charging system

The charging system features an inductive coupling system. When plugged into the charger, the torch is contact-free charged by induction. Thus, insufficient contact and corrosion of the contacts due to environmental influences are completely eliminated. Moreover, this technology also provides an enhanced protection of the system, which means that the charger can be mounted and operated in Zone 1, while the torch can also be operated in Zone 0.

Safety lighting included

If the power supply of the charger fails, the emergency lighting function switches the torch in it on automatically – regardless of the position of the switch. Optionally, to ensure that the torch is always in its place, there is a seal point for securing the torch in the charger. Thus, this innovative lighting system can also act as an essential part of stationary safety installations.

TX 20 LED torchlight

for use in hazardous areas
Zone Zero.

**TX 20 LED torchlight;
fixed on a helmet**

The TX 20 torchlight is
designed for standard helmet
holders.

**TX/CX 20 LED torchlights
and charger**

Together with the charger
CX 20, the torchlights TX 20
can be used as an emergency
light fitting.

**CX 20 charger**

for simultaneous charging of 3
TX 20 torchlights. The charger
can be mounted in hazardous
areas Zone 1.

**TX 40 LED torchlight**

For use in hazardous areas
Zone Zero

**TX 40 LED torchlight;
fixed upright lighting**

To use the TX 40 as an fixed
upright lighting, the support
bracket can be placed in
different angles

**TX/CX 40 LED torchlight and
charger**

Together wit the charger CX
40, the torchlight TX 40 can be
used as an emergency light
fitting

CX 40 charger

For mounting hazardous areas
Zone 1

Ordering details



TX/CX 20 lighting system

Typ	Scope of delivery-	Order No.
CX 20 and TX 20	Set: 3 torch lights and charger	1 1380 000 022



TX/CX 40 lighting system

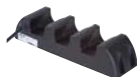
Typ	Scope of delivery-	Order No.
CX 40 and TX 40	Set: Torch light and charger	1 1380 000 003

Accessories TX/CX 20/40



TX/CX 20 lighting system

Typ	Scope of delivery-	Order No.
TX 20	Torch light	1 1380 000 020



TX/CX 20 lighting system

Typ	Scope of delivery-	Order No.
CX 20	Inductive charger	1 1380 000 021



TX/CX 40 lighting system

Typ	Scope of delivery-	Order No.
TX 40	Torch light	1 1380 000 001

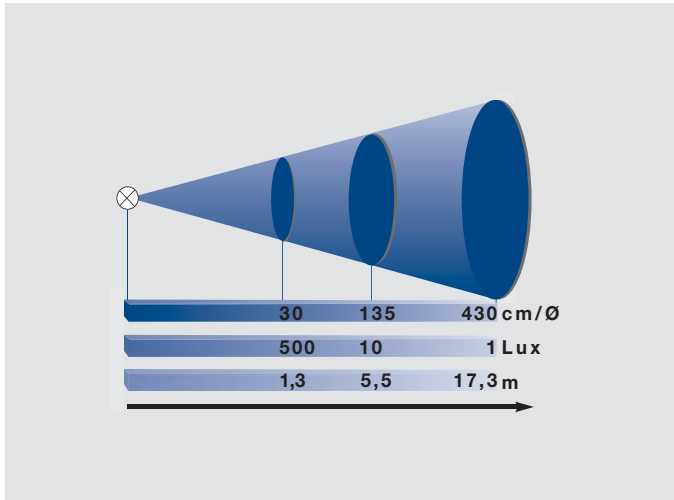


TX/CX 40 lighting system

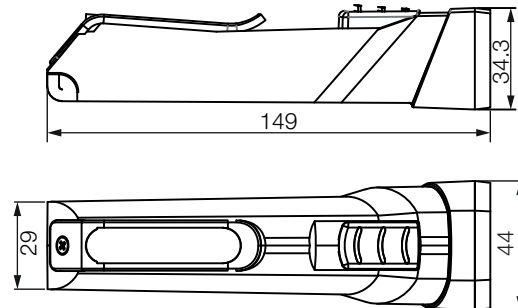
Typ	Scope of delivery-	Order No.
TX 40	Inductive charger	1 1380 000 002

Dimension drawing/range-diagramm

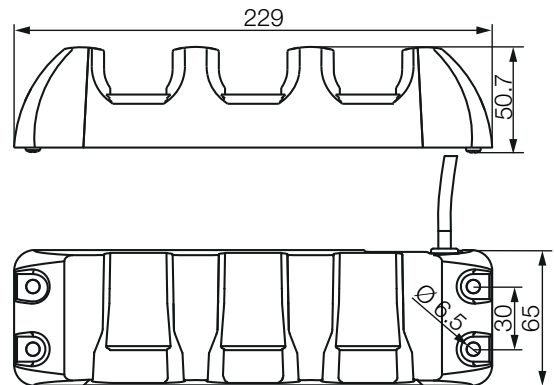
Range-Diagramm TX 20



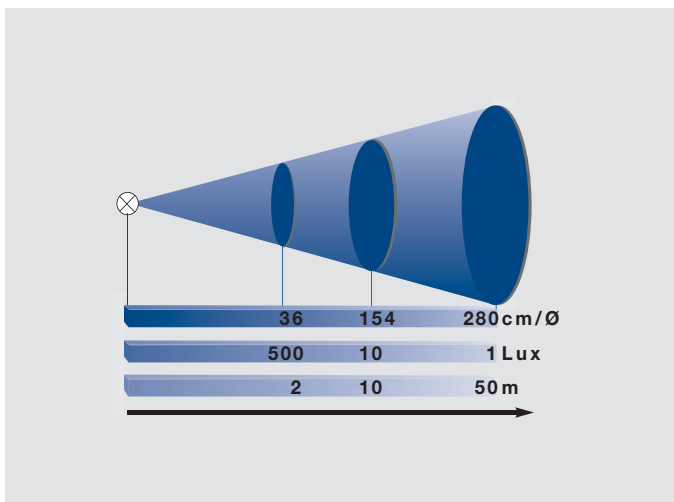
Dimension drawing TX 20



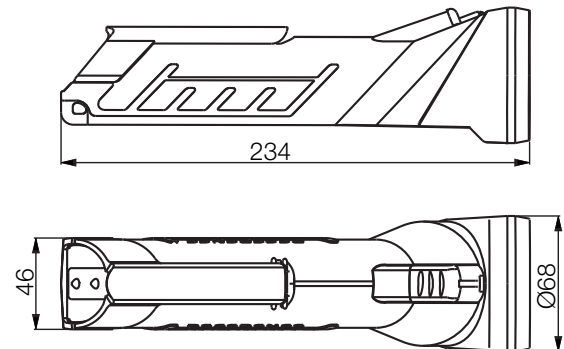
Dimension drawing CX 20



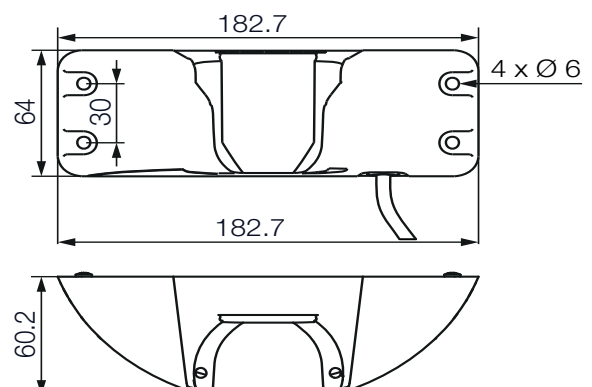
Range-Diagramm TX 40



Dimension drawing TX 40



Dimension drawing CX 40



Technical data



Technical data

	Torchlight TX 20	Torchlight TX 40
EC-Type Examination Certificate	DNV-11-ATEX-99371	DNV-2008-OLS-ATEX-38719
Marking to 94/9/EC	II 1 G Ex ia [op is] IIC T4 Ga	II 1 G Ex ia IIC T 3
IECEx Certificate of Conformity	IECEx DNV 11.0009	IECEx DNV 08.0010
Permissible ambient temperature	-40 °C up to 60 °C	-40 °C up to 60 °C
Lamp	high efficiency LED, 3 W	high efficiency LED, 3 W
Luminous flux	114 lm	200 lm
Max. luminous intensity	approx. 550 cd	approx. 5,000 cd
Light aperture	Polycarbonate with 5° lens/hardened scratch resistant glass 3 mm	Polycarbonate with 4° lens/hardened scratch resistant glass 3 mm
Indication lamps	red and green LED	red and green LED
Degree of protection accd. EN 60529	IP 67	IP 67
Enclosure material	Plastic yellow/black	Plastic yellow/black
Weight	0.13 kg	0.6 kg
Dimensions (LxWxH)	150 x 42 x 34 mm	230 x 70 x 70 mm
Operating time	approx. 5 h	approx. 5 h
Operating life	More than 1000 recharge cycles	More than 1000 recharge cycles



Technical data

	Charger CX 20	Charger CX 40
EC-Type Examination Certificate	DNV-11-ATEX-99371	DNV-2008-OLS-ATEX-38719
Marking to 94/9/EC	II 2 G Ex mb II T4 Gb	II 2 G Ex mb II T 4
IECEx Certificate of Conformity	IECEx DNV 11.0009	IECEx DNV 08.0010
Permissible ambient temperature	-40 °C up to 60 °C	-40 °C up to 60 °C
Rated voltage	100 -250 V AC	100 -250 V AC
Rated current	1.0 A, max.	1.0 A, max.
Frequency	50 - 60 Hz	50 - 60 Hz
Insulation class	II	II
Charging duration	approx. 3 h (80% in 2 h)	approx. 3 h (80% in 2 h)
Degree of protection accd. EN 60529	IP 67	IP 67
Standard cable lenght	2.0 m	2.0 m
Dimensions (LxWxH)	230 x 63 x 48 mm	185 x 65 x 60 mm
Weight	0.55 kg	0.6 kg

For your personal safety

Portable Ex-Light fittings

CEAG explosion-protected hand lamps are used wherever a reliable, safe and flexible source of light is needed. In industrial environments, on- and offshore in the oil and gas industry - whether in aggressive atmospheres in the field or in confined spaces in installations – torch lights, portable searchlights and hand and machine lamps are mainly used for security patrols, inspections and repair work. For safety reasons, the police and fire, technical relief and rescue services only use explosion-protected luminaires at the site of operation, because it is never possible to fully exclude the possibility of an explosive atmosphere.

In addition to reliability and safety, easy handling, robust design, light weight, lighting properties and long operating times are crucial requirements for portable Ex luminaires.

Better safe than sorry

Hazardous areas are subdivided into zones and, due to the barrier-free transitions between these zones, special requirements apply for the portable electrical equipment used. For this reason, our portable luminaires have been approved at least for use in Zone 1 hazardous areas – whereby, the TX/CX 20/40 series has even been approved for Zone 0.

Ergonomics: Single-hand operation

Our hand lamps were designed for single-hand operation. This means that they can be switched on or off with one hand – in particular when wearing work gloves. The other hand stays free for other tasks.

Lighting technology

Depending on the application, portable explosion-protected luminaires with different distributions of the luminous intensity are needed, e.g. wide beam (working light) or searchlight (spot) characteristics. This is made possible by the use of powerful lamps and various, partially variable light control systems. For example, by turning the rotating ring at the light output, an adjustable reflector can be changed from a wide beam to a searchlight.

More light thanks to LED technology

As pioneers in the field of innovative lighting systems, we have combined the state-of-the-art, high-performance LED technology with an optimized reflector technology. With this highly efficient technology, white LEDs with a low energy consumption provide an even, sharply defined luminous flux and, as a result, an optimum illumination of the work area. What is more, in addition to longer operating times and a longer service life, this technology also has the great advantage of being insensitive to shocks and impacts. As a broken filament is not possible, servicing and replacing lamps is no longer necessary!



Eaton's Crouse-Hinds division offers a range of cable fittings, enclosures, plugs and receptacles, industrial lighting fixtures, signals and alarms, and electronic components designed for the most demanding environments. The Crouse-Hinds business serves customers in the industrial and manufacturing, mining, oil and gas, solar, infrastructure and other markets.

Eaton's electrical business is a global leader with expertise in power distribution and circuit protection; backup power protection; control and automation; lighting and security; structural solutions and wiring devices; solutions for harsh and hazardous environments; and engineering services. Eaton is positioned through its global solutions to answer today's most critical electrical power management challenges.

Eaton is a diversified power management company providing energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power. A global technology leader, Eaton acquired Cooper Industries plc in 2012. The 2012 revenue of the combined companies was \$21.8 billion on a pro forma basis. Eaton has approximately 102,000 employees and sells products to customers in more than 175 countries. For more information, visit www.eaton.eu.

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