

## Luminaires to the New Standard

Explosion protected light fittings with EVG 09 in compliance with the latest generation of standards

**COOPER** Crouse-Hinds



# Ex fluorescent light fittings to the new standard

## Changes to Ex marking

In the course of the changes to the standards for Ex equipment, the marking of explosion-protected equipment has changed as follows:

Instead of the previous marking "EEx.." for "explosion protection according to the European standards", in the future Ex products will only be marked with "Ex.." before the type of protection.

If several types of protection are applied, these shall be listed in alphabetical order, e.g. "Ex d e ib". This means that in the future the various existing differences in the markings depending on the testing authority will be avoided.



## Status of the standards

The transition from the previous European standards for explosion protection of the series

### EN 50014 ff

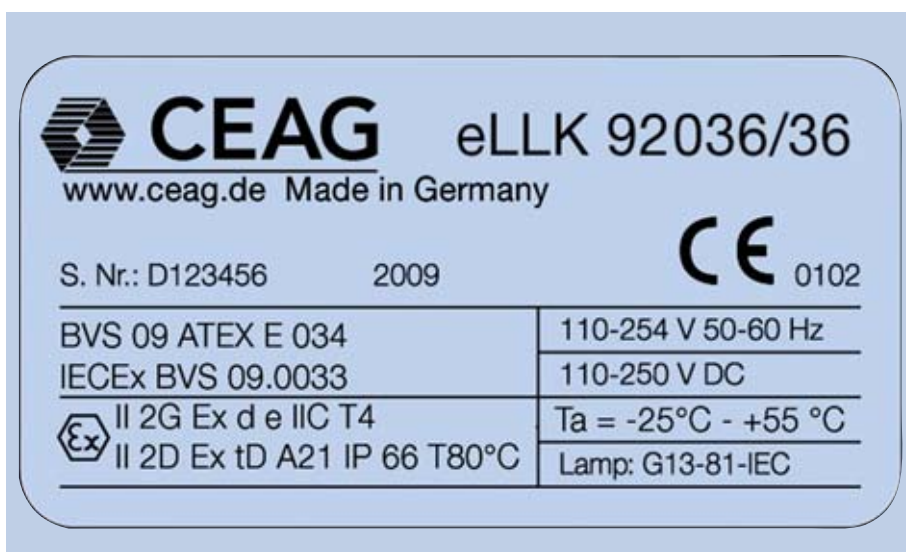
to the series

### IEC/EN 60079-..

has almost been completed.

Since this new generations of standards came into force, Cooper Crouse-Hinds has been continuously converting all its explosion-protected equipment to the new IEC/EN standards and has had them certified in accordance with these standards.

Therefore, in the future this changed marking will be found on all the CEAG type labels. The same applies to the details in the catalogues and data sheets.





Warning!

Application of the new IEC/EN-Ex standards is mandatory

In future, for all Ex equipment according to the ATEX directive, when using standards, the application of the harmonized standards is mandatory to fulfil the presumption of conformity of the ATEX directive.

The ATEX directive is not limited to **all new products** only.

**All equipment that is newly placed on the market** has to comply with the status of the harmonized IEC/EN standards that is valid at that time.

Information on the standards applied can be found in the **Declaration of Conformity**, which has to be supplied with every product.

In the event of changes to the harmonized standards, if necessary this Declaration of Conformity shall be amended to comply with the current status in the same way as products and shall reflect it.

Example:

Until now the CEAG Ex light fittings eLLK 92 were marked with the types of protection:

**“EEx ed IIC T4”**

whereby the “e” for increased safety, the “main type of protection” came first.

According to the new standard the marking is now as follows :

**„Ex de IIC T4”**

whereby the technology for the light fittings remains unchanged.

Generally, when referring to luminaries, we name the type of protection that is decisive for the enclosure, e.g. the eLLK 92 fluorescent light fitting is referred to as an “Ex-e luminaire” in “increased safety” design, while the FZD floodlight is referred to as an „Ex-d luminaire” in “flameproof enclosure “ design. However, in accordance with the provision named above, the future marking of the types of protection is the same for both examples “Ex de.”.



# Electronic Ballast EVG 09

## EVG 09

### Improved technology according to the latest standard for CEAG Ex light fittings

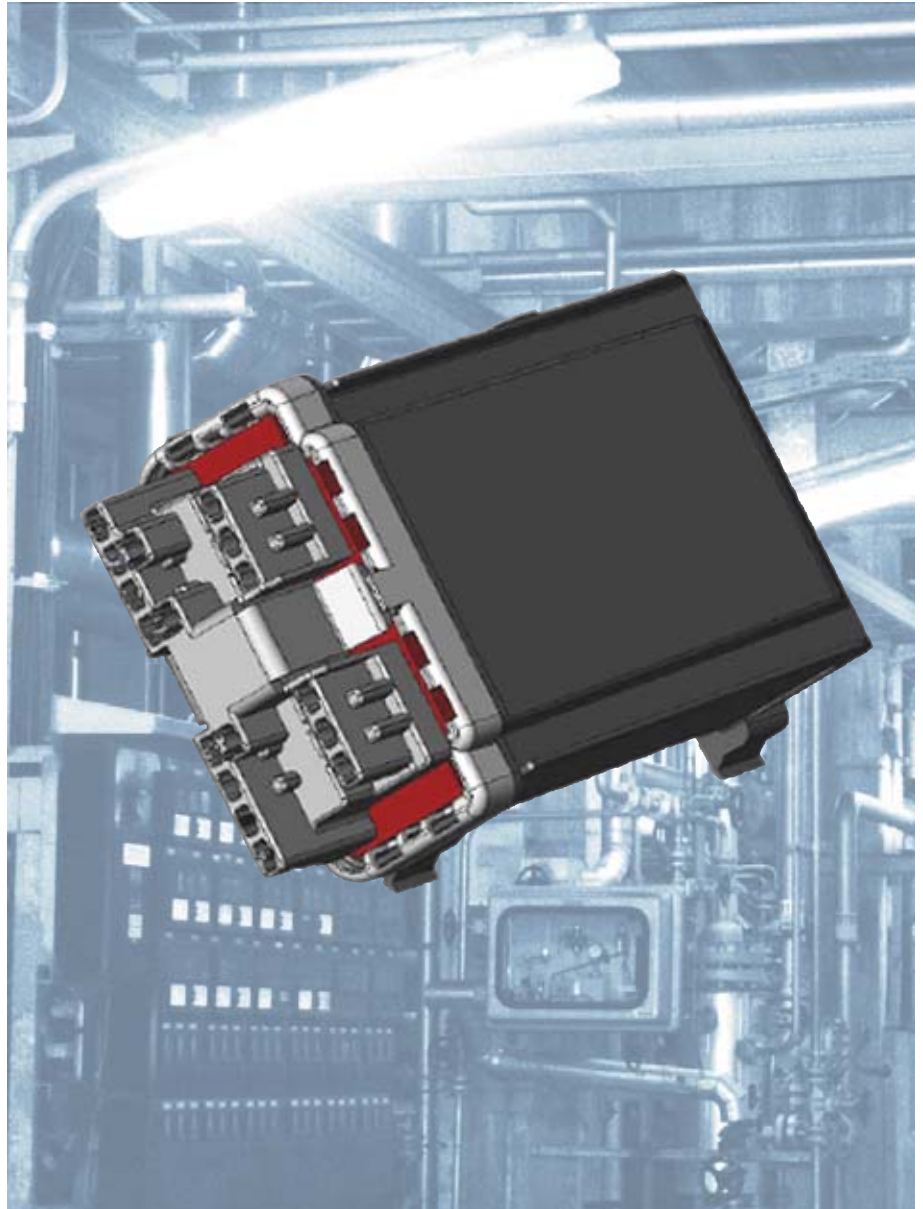
As pioneers and market leader in the development and production of explosion-protected luminaires, we have adapted our eLLK 92 series of fluorescent light fittings to comply with the requirements of the latest generation of Ex standards and have had them certified accordingly.



In the course of this process, the electronic ballast has also been modified and certified according to the latest standards.



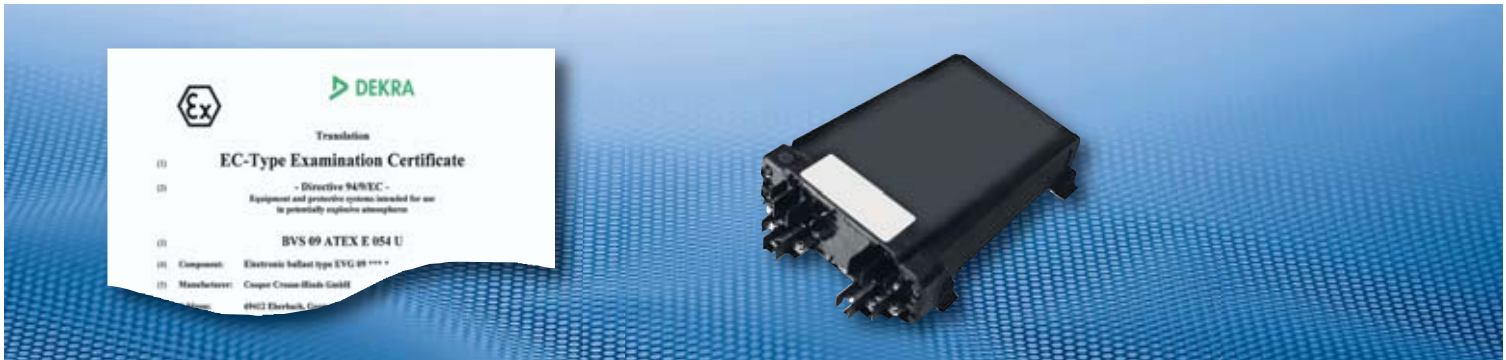
The new EVG 09 was developed in such a way as to retain the time-proven CEAG technology and quality, naturally including the EOL function.



All the EVGs (electronic ballasts) supplied by CEAG since 1988 feature monitoring of the lamp circuit, detection of the rectifier effect, as well as a shutdown of the circuit in the event that the lamp does not strike. Therefore, the CEAG EVGs already ensured a high level of safety at the end of service life of the lamp long before the discussion on EOL ever started.

The new EVG 09 also fulfils the relevant EOL requirements according to IEC 61347-2-3 and IEC 60079-7 (electrical apparatus in the type of protection „Increased Safety“) for luminaires for use in potentially explosive atmospheres zone 1.

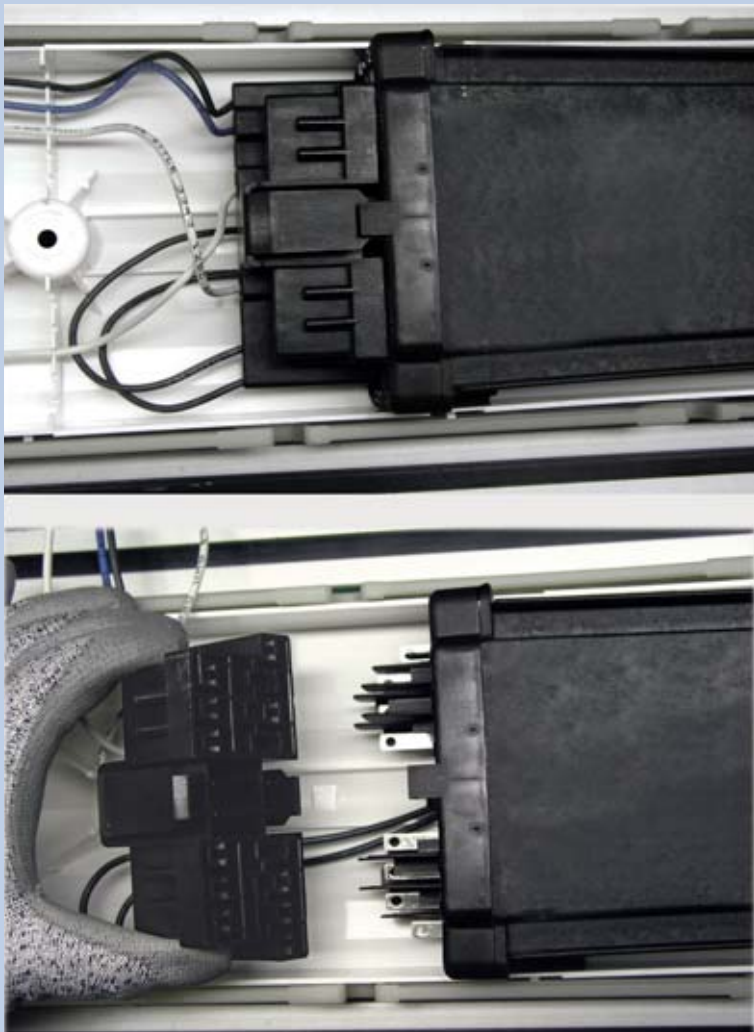
Thus, the EVG 09, which is certified to **BVS 09 ATEX E 054 U**, meets the latest findings and the newest standards.



## Easy replacement thanks to „plug-and-play“ technique

In the course of this conversion process, the customer-friendly „plug-and-play“ technique, which allows easy replacement, was developed.

The new EVG 09 is fully compatible with the previous EVG series. Therefore, only one spare part series is needed.



## The advantages for you:

- Reliable technique - with decades of experience in creating of EVGs
- Newest electronic circuit with less components
- Latest IC with increased monitoring functions
- Thermally optimized circuitry with less power loss for long service life, even in high ambient temperature. The max. of the permissible ambient temperature increases up to +55°C
- Improved EMC-characteristics
- Latest lamp circuit monitoring as an additional safety factor for your plant
- All requirements acc. to IEC/EN 61347-2-3 and 60079-7 (Ex-luminaires with fluorescent lamps in „Increased Safety“ (EOL) will be complied
- Electronic ballast especially designed for harsh and hazardous environments of zone 1 - no encapsulated industrial EVG
- Wide input voltage range and DC operation enables various applications
- Two separate lamp circuits (autarkic switching) provide more safety for your employees and installations
- Nearly resistant against harmonics and mains voltage fluctuations
- One lamp circuit can be switched off if the lamp is used in central emergency light systems (saving battery capacity)



# EVG 09 with Optimized Lifetime

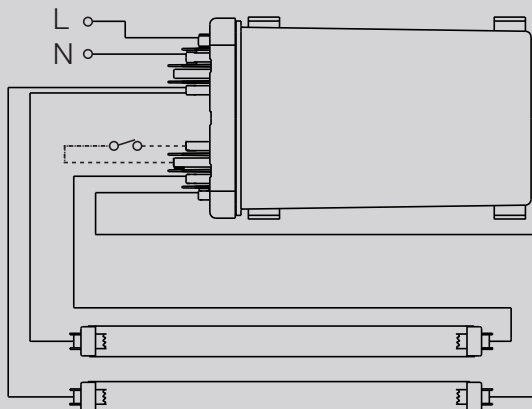
## EVG 09

### Latest circuit technology for an optimized lifetime

By use of the latest circuit technology for the EVG 09 the high reliability of the previous model could be improved further. Special value was placed on the thermal properties of the circuit.

#### The result is impressive:

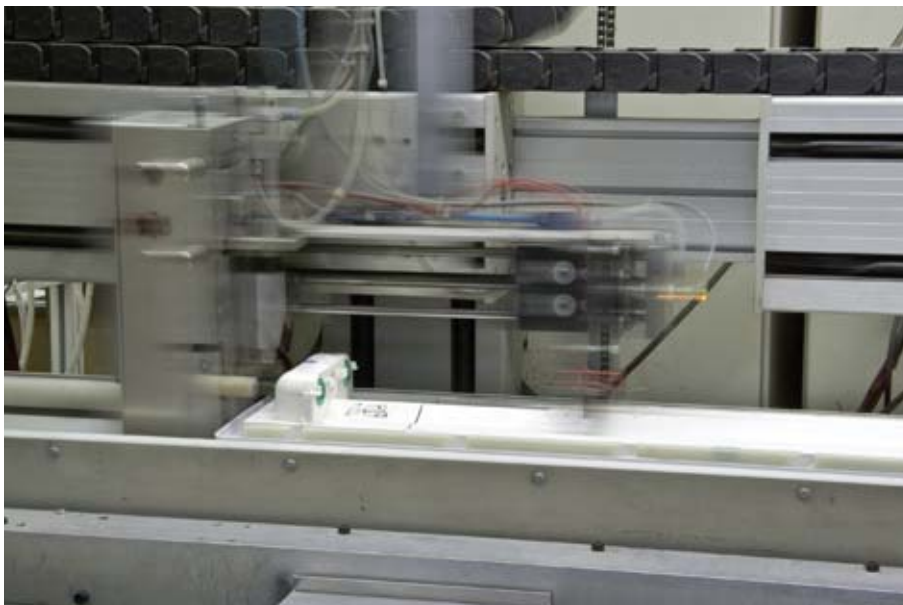
Even in permanent load by high ambient temperatures of the luminaire up to +55 °C the electronic ballast achieves the maximum lifetime.



To be able to ensure the high standard of quality of our products we are using comprehensive quality assurance systems. It goes without saying that we are certified according to the latest directives ISO 9001-2008.

Among others this means for the production of our EVG 09 comprehensive tests attending the assembly - including regular burn-in tests - up to the final check of the luminaire .





## Certification – The basis for safety

In addition to conformity with technical standards, the issue of approvals by so-called “notified bodies” (ATEX Directive 94/9/EC) is part of our day-to-day business. Individual components, sub-assemblies and complete installations are tested and certified by independent authorities. That certificate is the basis for the issue of the “Declaration of Conformity”, which assures you, our customer, that all the important requirements for explosion protection have been fulfilled.

You can only be certain of the safety of the installation if you have such official declaration.

With us you have a strong and competent partner for all matters of explosion protection operating all over the world.

## Quality without short-cuts

Comprehensive quality assurance systems – certified, of course, to the latest directives ISO 9001-2008 – are the basis for our day-to-day business.

Before our products are made available to you, we make sure that they fulfill even the most stringent requirements, because you must be able to rely on them in the event of an emergency.

Our technical solutions protect both property and lives. Our customers view us as a trusted partner for safety. Quality has top priority for our highly qualified employees and governs their actions.

The final inspection of our fluorescent light fittings is only one of the process steps for quality assurance to provide you with highest safety standards.

This pays off because our products have to remain fully functional at all times, even under the most adverse ambient conditions.

For this reason, for decades now, our products and solutions are in use in locations where utmost reliability is key.

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