

## Translation

# (1) 4. Supplement to the EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC Supplement accordant with Annex III number 6
- (3) No. of EC-Type Examination Certificate: **BVS 09 ATEX E 034**
- (4) Equipment: **Fluorescent lighting fixture type eLL\* \*\* \*\*\*/\*\* \***
- (5) Manufacturer: **Cooper Crouse-Hinds GmbH**
- (6) Address: **Neuer Weg-Nord 49, 69412 Eberbach, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this supplement.
- (8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment 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 II to the Directive. The examination and test results are recorded in the test and assessment report BVS PP 09.2044 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:  
**EN 60079-0:2009 General requirements**  
**EN 60079-1:2007 Flameproof enclosure 'd'**  
**EN 60079-7:2007 Increased safety 'e'**  
**EN 60079-11:2007 Intrinsic safety „i“**  
**EN 60079-18:2009 Encapsulation „m“**  
**EN 60079-31:2009 Protection by enclosures 't'**
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.
- (11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to 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 shall include the following:
- |  |                              |
|--|------------------------------|
| <b>II 2G Ex de IIC T4 Gb</b>   | Type without option; ZB; DCA |
|  <b>II 2G Ex de mb ib IIC T4 Gb</b> | Type NIB; LED                |
| <b>II 2G Ex de mb IIC T4 Gb</b>  | Type CG-S                    |
| <b>II 2D Ex tb IIIC T80°C Db IP66</b>  |                              |

DEKRA EXAM GmbH  
Bochum, dated 28<sup>th</sup> February 2013

Signed: Hans-Christian Simanski

Signed: Dr. Michael Wittler

Certification body

Special services unit



## 15.2 Description

The fluorescent lighting fixture type eLL\* \*\* \*\*\*/\*\* \* is an explosion-protected electrical apparatus that accommodates single or twin fluorescent luminaires with either lamp cap FA6 (one-pin) or lamp cap G13 (bi-pin).

Only separately certified EVGs, either one single, one double or two single, are used as electronic ballast, such as: EVG 09... (BVS 09 ATEX E 054 U), VE/EVG 05 (BVS 09 ATEX E 043 U) or VE 97... (BVS 09 ATEX E 043 U).

The luminaires may be replaced inside the potentially explosive atmosphere if the fluorescent lighting fixture is equipped with a separately certified light switch (BVS 12 ATEX E 086 U) which disconnects the light at all poles or if the voltage of the lighting fixture is set to zero before changing the luminaire. The variant without a light switch contains a relevant warning on the outside of the enclosure.

The lighting fixtures that are equipped with a luminaire size T12 (38 mm diameter) are exclusively used with mechanical protection.

The enclosure of the fixture consists of either glass-mat reinforced polyester or of stainless steel; the light-permitting diffuser is made of polycarbonate.

The lighting fixture type eLL\* \*\* \*\*\*/\*\* ZB is intended to be connected to a central battery system or emergency power supply. If the light operates on twin luminaires, each luminaire is supplied by a separate circuit via its own electronic ballast.

The lighting fixture type eLL\* \*\* \*\*\*/\*\* CG-S is equipped with a separately certified CG-S module (PTB 04 ATEX 2110 U), which can be connected to the central battery system (ZBS) of CEAG.

The lighting fixture type eLL\* \*\* \*\*\*/\*\* NIB is provided with an emergency light device which consists of one or two separately certified EVG 09... in conjunction with the supply unit VE 97... and / or the power supply / emergency light unit VE/EVG 05..., as well as a battery box type eBK02 or eBS09 (BVS 09 ATEX E 044 X) with an inserted battery of type 2710-3 (BVS 09 ATEX E 042 U).

### Reason of the supplement:

The luminaire is extended by the type variant with separately certified LED modules (BVS 13 ATEX E 018 U / IECEx BVS 13.0030 U). The LED modules can also be used as an exchange light source for luminaires beginning from production year 2011 if these are equipped with an electronic ballast EVG09.

## 15.3 Parameters

### 15.3.1 Electrical data

One-pin lamp cap type FA6

Type of luminaire	Type of electronic ballast	Nominal voltage	Frequency
eLL* ** 318	1x EVG 09 118	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 318/18	1x EVG 09 218	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 336	1x EVG 09 136	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 336/36	1x EVG 09 236 bzw. - resp. 2x EVG 09 136	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 358	1x EVG 09 158	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 358/58	1x EVG 09 258 bzw. - resp. 2x EVG 09 158	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 336/36 ZB	2x EVG 09 136	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 358/58 ZB	2x EVG 09 158	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 318/18 NIB	1x VE/EVG 05 218 bzw. - resp. 2x VE/EVG 05218-1	220 V – 254 V AC 110 V – 127 V AC	50 Hz – 60 Hz
eLL* ** 336 NIB	1x VE 97 236 + 1x EVG 09 136	220 V – 254 V AC 110 V – 127 V AC	50 Hz – 60 Hz
eLL* ** 336/36 NIB	1x VE 97 236 + 1x EVG 09 236	220 V – 254 V AC 110 V – 127 V AC	50 Hz – 60 Hz

### Bi-pin lamp cap type G13

Type of luminaire	Type of electronic ballast	Nominal voltage	Frequency
eLL* ** 018	1x EVG 09 118	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 018/18	1x EVG 09 218	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 036	1x EVG 09 136	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 036/36	1x EVG 09 236 bzw. - resp. 2x EVG 09 136	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 058	1x EVG 09 158	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 058/58	1x EVG 09 258 bzw. - resp. 2x EVG 09 158	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 036/36 ZB	2x EVG 09 136	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 058/58 ZB	2x EVG 09 158	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 018/18 NIB	1x VE/EVG 05 218 bzw. - resp. 1x VE/EVG 05218-1	220 V – 254 V AC 110 V – 127 V AC	50 Hz – 60 Hz
eLL* ** 036 NIB	1x VE 97 236 + 1x EVG 09 136	220 V – 254 V AC 110 V – 127 V AC	50 Hz – 60 Hz
eLL* ** 036/36 NIB	1x VE 97 236 + 1x EVG 09 236	220 V – 254 V AC 110 V – 127 V AC	50 Hz – 60 Hz
eLL* ** 018/18 CG-S	1x EVG 09 218 +CG-S Modul	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 036/36 CG-S	1x EVG 09 236 +CG-S Modul	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 058/58 CG-S	1x EVG 09 258 +CG-S Modul	220 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 018/18 DCA	1x EVG 09218 DCA Version	110 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz
eLL* ** 036/36 DCA	1x EVG 09236 DCA Version	110 V – 254 V AC 195 V – 250 V DC	50 Hz – 60 Hz

### LED module

Type of luminaire	Type of electronic ballast	Nominal voltage	Frequency
eLLK 92 LED 400	1x EVG 09 218	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz
eLLK 92 LED 800	1x EVG 09 236	110 V – 254 V AC 110 V – 250 V DC	50 Hz – 60 Hz

15.3.2 Thermal data

Type eLL* ** ***/**	
Ambient temperature range if $U < 220 \text{ V}$	$-25 \text{ }^\circ\text{C} \leq T_a \leq +50 \text{ }^\circ\text{C}$
Ambient temperature range if $U \geq 220 \text{ V}$	$-25 \text{ }^\circ\text{C} \leq T_a \leq +55 \text{ }^\circ\text{C}$
Type eLL* ** ***/** NIB	
Ambient temperature range	$-25 \text{ }^\circ\text{C} \leq T_a \leq +50 \text{ }^\circ\text{C}$
Type eLL* ** 058/58	
Ambient temperature range	$-25 \text{ }^\circ\text{C} \leq T_a \leq +40 \text{ }^\circ\text{C}$
Type eLL* ** LED ***	
Ambient temperature range	$-25 \text{ }^\circ\text{C} \leq T_a \leq +45 \text{ }^\circ\text{C}$

(16) Test and assessment report

BVS PP 09.2044 EG as of 28.02.2013

(17) Special conditions for safe use

None

---

We confirm the correctness of the translation from the German original.  
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH  
44809 Bochum, 28<sup>th</sup> February 2013  
BVS-Yil/Mu A 20120900



Certification body



Special services unit