Translation

1 EU-Type Examination Certificate Supplement 2

Change to Directive 2014/34/EU

2 **Equipment intended for use in potentially explosive atmospheres Directive 2014/34/EU**

3 EU-Type Examination Certificate Number: **BVS 09 ATEX E 169**

4 Product: **Luminaire type ESL55LED-Ex**

5 Manufacturer: **F. H. Papenmeier GmbH & Co. KG**

6 Address: **Talweg 2, 58239 Schwerte, Germany**

7 This supplementary certificate extends EC-Type Examination Certificate No. BVS 09 ATEX E 169 to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

8 DEKRA EXAM GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential Report No. BVS PP 10.2008 EU.

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

EN 60079-0:2012 + A11:2013	**General requirements**
EN 60079-1:2014	**Flameproof enclosure "d"**
EN 60079-31:2014	**Protection by Enclosure "t"**

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

II 2G Ex db IIC T6 Gb
II 2D Ex tb IIIC T80°C Db

DEKRA EXAM GmbH
Bochum, 2018-02-12

Signed: Dr Franz Eickhoff
Certifier

Signed: Dr Michael Wittler
Approver

This certificate may only be reproduced in its entirety and without any change.

DAkkS Deutsche Akkreditierungsstelle D-ZE-12069-03-00

DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany,
telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com

13 **Appendix**

14 **EU-Type Examination Certificate**

BVS 09 ATEX E 169
Supplement 2

15 **Product description**

15.1 **Subject and type**

Luminaire type ESL55LED-Ex

15.2 **Description**

With this supplement the certificate is changed to Directive 2014/34/EU.
(Annotation: In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.)

Reasons for the supplement:

-Change to Directive 2014/34/EU
-Rise to the current standard
-Optionally, 4-way or 7-way LED boards can be used in addition to the existing versions

Description of Product:

The luminaire type ESL55LED-Ex is made of a stainless steel housing and is suitable for use in areas hazardous to gases and dust in category 2G or 2D. The luminaire is used for object monitoring and remote control of process engineering processes in reactors, apparatus, vessels, etc. The input voltage is converted via a power supply card inside the luminaire to the working voltage of the lamps.

Lid and ring flange are additionally equipped with an O-ring.

15.3 **Parameters**

Electrical parameters

Variant	Voltage	Power Output
3-way LED	24 V AC / DC	15 W
	120 - 230 V AC / DC	15 W
4-way LED	24 V AC / DC	15 W
	120 - 230 V AC / DC	15 W
6-way LED	24 V AC / DC	20 W
	120 - 230 V AC / DC	20 W
7-way LED	24 V AC / DC	20 W
	120 - 230 V AC / DC	20 W

Thermal parameters

Ambient temperature range -20 °C up to +40 °C

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telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com

16 **Report Number**

BVS PP 10.2008 EU, as of 2018-02-12

17 **Special Conditions for Use**

None

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

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
Bochum, dated 2018-02-12
BVS-Wlo/Nu A 20170412

Certifier

Approver

This certificate may only be reproduced in its entirety and without any change.

DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany,
telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com

Translation

(1) 1. 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 169**

(4) Equipment: **Luminaire type ESL55LED-Ex**

(5) Manufacturer: **F.H. Papenmeier GmbH & Co. KG**

(6) Address: **Talweg 2, 58239 Schwerte, 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 10.2008 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 60079-31:2009 Protection by enclosure "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:

II 2G Ex d IIC T6 Gb
II 2D Ex tb IIIC T80°C Db

DEKRA EXAM GmbH
Bochum, dated 24th April 2013

Signed: Simanski
Certification body

Signed: Dr. Wittler
Special services unit

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DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

(13) Appendix to

(14) **1. Supplement to the EC-Type Examination Certificate BVS 09 ATEX E 169**

(15) 15.1 Subject and type

Luminaire type ESL55LED-Ex

15.2 Description

The luminaire type ESL55LED-Ex consists of a stainless steel enclosure and is suitable for use in both gas and dust hazardous areas of categories 2G and 2D. The luminaire serves the purpose of monitoring objects and of remote-controlling procedural processes in reactors, apparatuses, containers etc. Inside the luminaire, the input voltage is adjusted to the operating voltage of the LED illuminants by means of a power board.

The lid and the ring flange are provided with an o-ring.

Reason for this supplement is the update to the current standards, the addition of two more variants of luminaires (24 V and 120-230 V with 6-times LED) and the optional use of cable entries with sealing rings and cables according to the list in clause "parameters".

15.3 Parameters

15.3.1 Electrical parameters

15.3.1.1 3-times LED

Voltage	**Power**
24 V AC/DC	15 W
120 - 230 V AC/DC	15 W

15.3.1.2 6-times LED

Voltage	**Power**
24 V AC/DC	20 W
120 - 230 V AC/DC	20 W

15.3.2 Thermal parameters

Ambient temperature range	-20 °C ... 40 °C

15.3.3 Cable entries (non-potted technique)

Type	Certificate	Clamping range [mm]
RST Alpha X	IMQ 08 ATEX 021 X	3-12
HSK-INOX-PVDF-Ex-d	KEMA 99 ATEX 6968 X	7-12

15.3.4 Cables (together with cable entries according to 15.3.3)

Type	Cross section	Diameter [mm]	Cable length min. [m]
Sinotherm 110 H05GG-7	3x 1,5 mm²	8,6	1
Sillflex UR AWG18	5x 1,0 mm²	10,3	1
Ölflex Heat 180 H05SS-F	3x 1,5 mm²	8,9	1
Ölflex Classic 110 Black	3x 1,5 mm²	10,2	1

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(16) Test and assessment report

BVS PP 10.2008 EG as of 24th April 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, 24th April 2013
BVS-Kir/Ma A 20120430

Certification body

Special services unit

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DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

Translation

(1) # EC-Type Examination Certificate

(2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use in potentially explosive atmospheres

(3) **BVS 09 ATEX E 169**

(4) **Equipment:** **Luminaire type ESL55LED-Ex**

(5) **Manufacturer:** **F.H. Papenmeier GmbH & Co. KG**

(6) **Address:** **58239 Schwerte, Germany**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.

(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 10.2008 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2006	General requirements
EN 60079-1:2007	Flameproof Enclosure
EN 61241-0:2006	General requirements
EN 61241-1:2004	Protection by Enclosures

(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 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:

II 2G Ex d IIC T6
II 2D Ex tD A21 IP67 T80°C

DEKRA EXAM GmbH
Bochum, dated 6th January 2010

Signed: Simanski
Certification body

Signed: Dr. Eickhoff
Special services unit

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DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

(13) Appendix to

(14) # EC-Type Examination Certificate

BVS 09 ATEX E 169

(15) 15.1 Subject and type
Luminaire type ESL55LED-Ex

15.2 Description
The luminaire type ESL55LED-Ex consists of a stainless steel enclosure and is suitable for use in both gas and dust hazardous areas of categories 2G and 2D. The luminaire serves the purpose of monitoring objects and of remote-controlling procedural processes in reactors, apparatuses, containers etc. Inside the luminaire, the input voltage is adjusted to the operating voltage of the LED illuminants by means of a power board.

Category 2G:
The luminaire type ESL55LED-Ex is manufactured according to the type of protection Flameproof Enclosure 'd'.

Category 2D:
The luminaire type ESL55LED-Ex is manufactured according to the type of protection Protection by Enclosures 'tD'.

15.3 Parameters

15.3.1	Electrical data			
15.3.1.1	24V-version			
	Input voltage		AC/DC	24 V
	Power	max.		15 W
15.3.1.2	120V up to 230V-version			
	Input voltage		AC/DC	120 - 230V
	Power	max.		15 W
15.3.2	Thermal data			
	Ambient temperature range			$-20°C \leq T_a \leq +40°C$
	Temperature class			T6
	Max. surface temperature			$\leq 80°C$

(16) Test and assessment report
BVS PP 10.2008 EG as of 06.01.2010

(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.

44809 Bochum, 10.02.2010
BVS-Kr/Ld/Ar E 0131/10

DEKRA EXAM GmbH

Certification body

Special services unit

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